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ABSTRACT

Characteristics of students attending short-cycle institutions are explored in this OECD study in order to facilitate effective planning and policy decisions concerning the whole postsecondary system. Focus is on the students' social and educational background, motivations and expectations, and a comparison of these characteristics with the original and formal objectives that determined the creation of the short-cycle institutions. In view of the conceptual, methodological, and resource problems involved in such an international project as this, coverage was limited to a small but representative number of countries and institutions. Three types of institutions are examined: the polytechnics in the United Kingdom; the University Institutes of Technology (IUT) in France; and the Two-Year Postsecondary schools (Visa Skole) in Yugoslavia. Results of this study suggest that it is not possible to promote short-cycle higher education to such prestige that a significant number of students will choose it. As long as both long and short systems of higher education continue to exist side by side, it is not possible to have high-level vocational education that also caters to a large number of students. If its level is high, it tends to become longer; if short and appealing to a large mass of students, its level will be lower. (LBH)

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STUDENTS IN SHORT-CYCLE HIGHER EDUCATION

FRANCE, GREAT BRITAIN AND YUGOSLAVIA

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ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT
PARIS 1976

STUDENTS IN SHORT-CYCLE HIGHER EDUCATION

FRANCE, GREAT BRITAIN AND YUGOSLAVIA

by

Philippe Cibois and Janina Markiewicz-Lagneau

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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FOREWORD

An important problem facing OECD Member countries in the reform of their higher education systems is the development of new types of programmes and institutions designed to respond both to the increasing diversity of students entering post-secondary studies and to the requirements of middle-level manpower for industry and services.

Although strategies of diversification differ from country to country, some common trends and preoccupations can be discerned. In particular, the aim during the past decade has been to develop types of education which in the past had been neglected, or not represented at all, in most of the existing universities. For the majority of OECD countries, this has meant setting up institutions or courses offering post-secondary education of shorter duration with a strong vocational component, generally grouped under the "non-university sector" of higher education.

An analysis of these developments at the present juncture was considered of particular importance by the Education Committee of OECD which consequently included in its programme on future structures of post-secondary education a study of problems facing "short-cycle institutions" and of their place and role in the overall system of higher education.

The first phase of this programme focused on an analysis of a number of specific issues related to the central concern of the development of short-cycle institutions, namely how to contribute to the diversification of post-secondary education by providing different types of programmes and courses to those existing in universities, without their automatically becoming a less privileged or "less noble" sector of the post-secondary system. The series of studies and reports prepared throughout this first phase were discussed at an international meeting on Short-Cycle Higher Education organised by OECD in 1971 and were subsequently published. (1)

The second phase of this programme of work - of which the present report is the final outcome - deals with the characteristics of

1) Short-Cycle Higher Education : A Search for Identity, OECD, Paris, 1972.

students attending short-cycle institutions. The reason for giving special attention to this theme was the growing awareness that a better understanding of the student population in these institutions, of their social and educational origin, of their motivations and expectations, as well as a confrontation of these characteristics with the original and formal objectives which determined the creation of the short-cycle institutions, is necessary for planning and policy decisions concerning the whole post-secondary system. This is particularly so in view of the proven autonomous demand which has in the past determined the pattern of growth in higher education.

In view of the conceptual, methodological and resource problems involved in launching and co-ordinating, at an international level, a major project of this kind, it was decided to limit its coverage to a small, but representative, number of countries and institutions. Three types of short-cycle institutions were thus selected: the Polytechnics in the United Kingdom (created in 1966); the University Institutes of Technology (IUT's) in France (created in 1966) and the Two-Year Post-Secondary Schools (Više Škole) in Yugoslavia (developed in the early sixties).

The following report presents the comparative analysis of the three sample surveys of students attending these institutions, undertaken during the early seventies. Since one of the main objectives of the study was to examine the relation between the status of a particular type of institution within the overall post-secondary system and the characteristics of its students, their attitudes and aspirations, the results of the individual surveys were presented so as to show their significance within each national setting. Moreover, as all three enquiries followed a common conceptual framework and methodology the study has also been able to draw some conclusions based on international comparisons.

It is hoped that the present volume will contribute towards a better knowledge and understanding of these new and relatively unknown post-secondary institutions, and also provide encouragement for further studies on the nature of individual demand for post-secondary education.

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INTRODUCTION

Compared with education as a whole in most European countries, short-cycle higher education is still fairly limited in extent. An analysis of enrolment gains in short-cycle higher education (SCHE) and long-cycle higher education (LCHE) shows that between 1960 and 1970 the annual increase in LCHE was 8.7 per cent as against only 7.3 per cent for SCHE. It may however be pointed out that in non-European OECD Member countries SCHE grew faster than LCHE (growth rates respectively 11.7 and 7.3 per cent). (1)

In spite of its relatively low-ranking position, SCHE is a major subject of concern owing to the crisis generally affecting higher education in many countries. The following facts are thus noted :

- generally increased enrolments in secondary education automatically cause greater numbers to seek access to higher education;
- such applicants, even if not admitted into long-cycle higher education cannot easily enter working life, since secondary schools usually provide no vocational preparation;
- a large proportion of applicants admitted into LCHE select types of course (such as arts) for whose output there is a limited economic demand; it has often been stressed that teaching in universities, for example, is still directed towards theoretical ends and one is geared to research rather than to entry into working life. Many students discover after some years of LCHE that the diplomas they receive, while conferring a certain degree of prestige, do not enable them to find employment, and the social effects of disappointments of this kind are sufficiently widespread for a remedy to be sought.

We may sum up the situation by saying that since the objectives of LCHE have remained unchanged (a "theoretical" and cultural education being the ultimate goal) and since heavier secondary-school

1) "Quantitative Trends in Post-Secondary Education", in Towards Mass Higher Education, Issues and Dilemmas, OECD, Paris, 1974.

enrolments cause many more individuals to be admitted into LCHE, the system has proved increasingly unsuitable to meet the post-secondary educational aspirations of broad strata of the population.

Most countries have paid particular attention to short-cycle higher education as a means of solving this type of problem. The explicitly stated goal is invariably to train middle-level staff not trained in long-cycle institutions (LCIs), whether in the secondary sector (technology) or tertiary (trade, business and the professions). Unlike LCIs, which provide a theoretical, abstract type of training, the purpose of these new institutions is to teach both practice and theory and technical as well as scientific subjects.

A more or less implicit goal of SCHE is to divert student flows from secondary education into courses of study which presumably correspond more closely to the initial training, motivations and desires of some of these students and thus offer them better career opportunities.

It may be added that in many countries the traditional universities seem powerless to introduce needed innovations fast enough in the various areas which determine how efficient and how well adjusted to the modern world they will be. Whether in the matter of curricula, teaching methods, management, organisation or relations with the outside world, the degree of resistance and inertia found in such universities is often difficult to overcome.

The inference is that new institutions lacking in any age-old traditions can lend themselves to certain innovative processes far more easily and under better conditions than traditional establishments.

Since there is a massive demand at the higher education level, SCIs should enable the failures and dropouts so widely prevalent in LCIs to be avoided and moreover provide a type of training more closely geared to working life. Of the many obstacles which however still hinder their growth, the following should be mentioned :

- LCHE is still highly regarded by middle-class families whose children now have access to this type of education, and any attempt to turn them away from it might well be looked upon as persecution and interference with their social advancement. Just as in the case of technical secondary education, no official statement regarding the equal status of different types of training can make the parties concerned forget that the most gifted pupils invariably enter the longer and more selective educational system. (It is however only right to point out that a long-cycle, selective yet career-oriented type of education such as that dispensed by the French "grandes écoles" may enjoy considerable prestige).

- the continued lack of rapport between educational systems, even SCHE, and the business world. While those responsible for LCHE for the most part do not consider this a problem, indeed this does not apply to the advocates of SCHE : the obstacles lie rather with the firms, where up to now many middle-level executives have been trained through industry-based upgrading schemes instead of being recruited from among graduates. A significant instance is the situation in France, where holders of the baccalauréat or a first degree can compete in government examinations but where the diploma awarded by the short-cycle establishments, the University Institutes of Technology (IUTs), is not recognised, even though these institutes have been in existence since 1965.

At all events, SCHE appears to be a highly worthwhile innovation, which may be expected to spread, yet will be difficult to put into practice and apt to have many social as well as economic implications.

While various types of short-cycle higher educational establishments have been operating in Europe for the past ten years, as a rule little is known about their operation and in particular about the students who attend them. For this reason, a comparative study was believed worth while; one which, it is hoped, will show how objectives stated at the time of setting up these institutions have in fact been achieved after several years of activity. The opportunity for such a study was provided through action initiated by the OECD; in 1971, three surveys were conducted concurrently : one in the French IUTs, one in the British Polytechnics, and one in the Yugoslav Viša Škola.

The questionnaire was drawn up jointly by one team from each of these three countries,(1) and our aim was to collect information which would provide answers to the following questions :

- 1) The following people contributed to designing the overall conceptual research framework and preparing the questionnaires in conjunction with the OECD Secretariat : R. Boudon and J. Markiewicz-Lagneau for France; B. Sorokin and M. Cudina-Obradovic for Yugoslavia; and A. Little and S. Lanzer for Great Britain. Mrs. Lagneau, Mrs. M. Netter and Mr. J. Lorieux were responsible for the French part of the survey, which was issued by the OECD in 1973 under the title "Les étudiants des Instituts Universitaires de Technologie en France". The data compiled by Britain and Yugoslavia were presented by the teams in the form of partial reports, which were useful for preparing the present paper. But for the sake of overall consistency, most of the time recourse was had to background information provided by the OECD.

- What students attend SCIs ?
- What is their social and educational background ?
- What factors influenced their choice of this type of education ?
- How do the students rate the establishment they attend ?
- What are their plans for the future ?

The aim of the present report is a comparative analysis of results yielded by the three surveys. (1)

The difficulties will also be apparent. Educational systems marked by considerable differences had to be compared, and an identical questionnaire could therefore not be used in all three cases. Adjustments were needed which made comparisons harder. Differences in social background are reflected in statistics; for instance, the United Kingdom does not include "farmers" in the categories used for defining social background because the category is so small. This is not the case so far in France and even less so in Yugoslavia.

To facilitate comparison we shall begin by considering the various national types of SCI and their status since they were set up in the different countries. This will be followed by a comparison of SCIs and LCIs in terms of their student characteristics.

We shall then undertake a more specific study of samples of students interviewed during the surveys. We shall endeavour to show the extent to which the populations of origin are represented and shall attempt to detail their characteristics (e.g. sex, age, social and educational background).

During a third stage, we shall investigate the reasons for their "choice of studies", i.e. the time at which the decision was taken, the motives for such a choice, outside influences, and in particular the role played by parents' attitudes.

We shall then examine how the SCI is perceived by the student : is it regarded as an extension of secondary school or as having similar status to the LCI ? The purpose here will be to discover what sort of brand image the SCI succeeds in imparting to its students.

Finally, we shall try to see how students in SCIs visualise their future. Whether they propose to enter working life immediately after graduation or look upon SCHE as merely a step to further study are questions we shall attempt to answer.

In order to make this report easier to read by non-specialists, we have sought to translate tables of figures into graphic terms. The aim is to provide in the diagrams a comprehensive and easily read summary of the contents of the tables and the accompanying text,

- 1) The value of research covering these three types of establishment is evident, since they reflect three different types of post-secondary system.

which will enable those who have only time for a rapid scanning of the diagrams to obtain a fair idea of the subject-matter discussed in this report. (1)

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- 1) Regarding the principles of such an approach, see J. Bertin, Sémiologie graphique, Paris, 's Gravenhage, Mouton.Gauthier-Villars, 1967.

Chapter I

THE VARIOUS TYPES OF SHORT-CYCLE HIGHER EDUCATION

THE SITUATION IN FRANCE, GREAT BRITAIN AND YUGOSLAVIA : SOME GENERAL REMARKS

While most developed countries have somewhat different types of short-cycle higher education, several types unquestionably have common traits. The Organisation for Economic Co-operation and Development (OECD), in its report on SCHE (1), has attempted to define the different types of short-cycle institutions. Three models were identified : the multipurpose model, the specialised model, and the binary model.

The multipurpose model is intended to fulfill a number of functions. This type of institution :

- provides a general form of post-secondary education for broad groups reaching this stage;
- enables the selection of students best fitted for long-cycle higher education;
- prepares these students for long-cycle education (propaedeutic function);
- provides others with an opportunity of being trained for a profession in two years;
- meets adult continuing training requirements.

As regards student admissions, the logic of the system consists in accepting all students who have reached post-secondary level.

In the specialised model, the SCIs merely complete the vocational training of students from the non-academic streams schools. This implies, unlike the case for the multipurpose model, that a streaming process has already taken place during secondary education.

The binary model may be regarded as a compromise between the two previous systems. Standards of admission are less rigorous than for LCHE, even if a long-cycle type of education is provided.

1) Dorotea Furth, "Short-Cycle Higher Education : Some Basic Considerations", in Short-Cycle Higher Education, OECD, Paris, 1973, pp. 415.

Instruction is however vocationally oriented. There are two sectors of higher education, one more theoretical and traditional and the other more practical and innovative.

In the description of the above three models which differs somewhat from that of the OECD, we have tried to show the direction taken by SCIs according to country. If the various short-cycle institutions are examined separately, it will be noted that the situation in a particular country more or less closely approximates to a given model without always being absolutely identical. For instance, the Junior Colleges or Community Colleges in the United States are typically representative of the multipurpose model. (1)

Until the early 1960s the specialised model existed in nearly all continental European countries, but in France, for example, it should be noted that although such a model of vocational education is still to be found, since 1965 University Institutes of Technology (IUTs) have been set up which may be regarded as a first step towards the binary model. Moreover, with the introduction of the Diplôme d'Etudes Universitaires Générales (DEUG) two years ago, France may be said to be approaching the multipurpose model : the relevant decree (1) refers to three functions attributed to this latter model : general education, orientation, and training for direct entry into working life.

With regard to the binary model, the only country which comes near it is Great Britain, where two systems are developing independently of each other : university and advanced further education. Since the polytechnics are included in our study, this system will also be covered in detail.

Following this general presentation, we shall discuss the three countries for which surveys were conducted in depth, i.e. Yugoslavia, Great Britain and France. Higher education in each of these countries, its development and reasons leading to reforms will be described, together with the social characteristics of the students according to the type of institution attended and any changes in these characteristics which may have occurred.

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- 1) See S.V. Martorana, "Community-Junior Colleges in the United States", in Short-Cycle Higher Education, op. cit., p. 123.
 - 2) Journal Officiel of 3rd March, 1973.

I. HIGHER EDUCATION IN YUGOSLAVIA

Higher education in Yugoslavia is provided by four types of establishment, of which the first two account for 95 per cent of the student force. These are : (1)

1. The Faculties, which provide a university education up to postgraduate level in every field, whether in traditional subjects (arts, sciences, law and medicine) or in more recent and practical disciplines (e.g. economics, technology, agriculture and veterinary science). These faculties now account for some 65 per cent of the Yugoslav student force.
2. The Viša Škola, or schools providing two years of post-secondary education. Their aim is to train qualified personnel to meet the needs of the economy. The subjects taught cover all economic sectors - leading fields are technical education (20 per cent of enrolments), economics (25 per cent) and teacher training (30 per cent). The Viša Škola account for 31 per cent of the student force.
3. The Visoka Škola, or Colleges, of which there are nine accounting for less than 3 per cent of the student body, teach certain special subjects (pedagogics, music, law, agriculture, economics).
4. The Art Academies, with less than 1 per cent of total enrolments.

When viewed as a whole (see Table A in Annex) it will be noted that total enrolments rose from 104,000 in 1960 to 261,000 in 1971, or annually by 8.7 per cent. If yearly rates of growth are examined (see Figure 1) it will be seen that the pace has been steady since 1964.

The growth of higher education has not been evenly spread among all types. Whereas colleges and art academies have always accounted for some 3 and 1 per cent of total numbers, the distribution between Faculties and Viša Škola shows substantial variations, as may be seen from Table A and Figure 2, which indicate rates of growth in enrolments by type of institution. The most evident development is the progress made by the Viša Škola at the expense of the Faculties from 1960 to 1968, which has since slightly fallen off. (2)

- 1) See Institute for Social Research, Zagreb, "Development of Two-Year Post-secondary Schools in Yugoslavia", in Short-Cycle Higher Education, op. cit.
- 2) This seems to be linked with more strict selection for university entry in the 60s. The immediate outcome of this is that many candidates who were unable to enter university have turned to the Viša Škola.

Figure 1
YUGOSLAVIA
 GROWTH OF HIGHER EDUCATION
 1960 - 1971

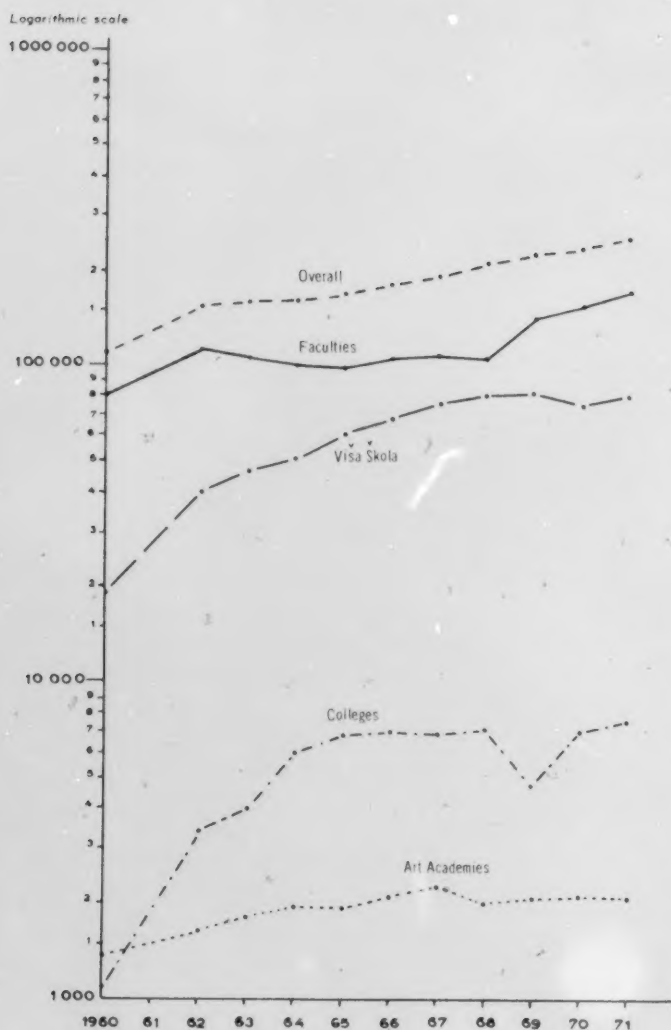
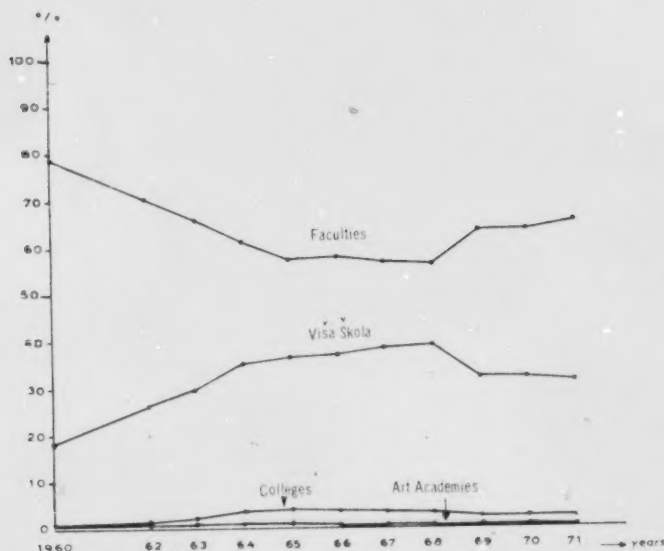


Figure 2

YUGOSLAVIA

GROWTH OF HIGHER EDUCATION 1960-1971

(Percentage distribution of students by type of institution)



The main reason for the development of the Viša Škola was that Yugoslavia needed middle-level staff in expanding production which was developing so rapidly that traditional on-the-job training for such staff no longer sufficed, and the gap had to be bridged by training manpower with a good general level of education and vocational instruction. It was necessary to train people who had completed their secondary education by adding a vocational element.

A measure initially taken for this purpose was to split the four-year cycle in a number of universities into two self-contained two-year cycles. This reform did not affect all universities to the same extent and was only applied from 1962 to 1967. After this date, the trend was to revert to the long four-year cycle. The reasons for the failure of the experiment are not yet entirely clear, but the following facts may be noted :

- supply was not adjusted to demand : graduates from the university short-cycle had difficulty in finding employment. This situation may perhaps be ascribed to the universities' lack of understanding of the needs of industry.

- practically-oriented courses are unpopular in university circles, which rather favour a long theoretical training before any practical courses.

During this same period (1960-1968) the Viša Škola expanded. Unlike the university short-cycle courses, they seem to have closer links with the industries and services and supply them with middle-level personnel. This is because of the high decentralisation of such establishments, which could be set up by a wide variety of local authorities (municipalities, social agencies and enterprises) and thus be spread throughout the country.

Another effect of this geographical dispersion and of the type of instruction dispensed, was to democratise higher education by allowing individuals who had already entered employment to receive higher education - in particular through part-time courses which, in 1971, were attended by 17 per cent of Faculty students and approximately one half of Viša Škola students (47 per cent). (1)

On the other hand, this extreme decentralisation accounts for the relative decrease in Viša Škola enrolments since 1968. Much duplication as well as many institutions which were inadequately financed have been eliminated.

The same admission requirements apply to Faculties and the Viša Škola and may be summed up as follows :-

- a secondary education adapted to the desired curriculum is required;
- a selection procedure is in force.

1. Level required

While a secondary school leaving certificate is required, it does not automatically grant access to any and all types of higher institution. There must be some relation between the subjects taught : the opportunities for specialisation thus exist in secondary schools for such subjects as technology and business administration, and courses in these subjects must have been taken for admission into the corresponding Faculties or Viša Škola. Students who have not so specialised are required to pass an entrance examination. (Training received in a Gymnasium is usually considered to qualify students for any type of higher education.)

Adults desiring to enter higher education must have had job experience and must take an entrance examination.

1) Yugoslav Statistical Yearbook, 1971.

2. Selection

As the number of places is limited, if need be admission is by competitive examination. Students who have obtained their secondary-school leaving certificates with distinction are usually exempted from this requirement.

Social background

Here, the aim of research has been to determine the extent to which social background (or affinity with a social group) affected the choice of some particular type of institution. For technical reasons we were compelled to define social backgrounds in terms of socio-occupational categories, since this was the only information we had.

In the present case, one difficulty was that the available statistics classified occupations sometimes by sector of activity (e.g. agriculture, transport), sometimes according to status within the production system (industrial workers), or on the basis of ill-defined criteria (e.g. the group designated as "senior executives" (Table 1) includes the following: specialists - meaning expert, inspector, etc., artists, politicians and managers). In spite of its shortcomings, this classification can, however, be used to identify divisions in the social hierarchy scale: generally speaking, those employed in commerce thus rank above industrial workers simply as a result of the distinction between non-manual and manual work.

Table 1 indicates the social background of full-time students according to type of institution. Each line, i.e. each group, shows both the student enrolments for each type of institution as well as the corresponding percentage. For example, it will be seen from line 1 that among a total of 32,041 students whose fathers were senior executives 26,606, or 83.0 per cent, enrolled in Faculties, 13.1 per cent in Viša Škola, 1.8 per cent in colleges and 2.1 per cent in art academies. The figure of 32,041 for this group as a percentage of the total number of 166,725 full-time students in 1971 amounts to 19.2 per cent (shown in the "Total" column).

The largest group attending Faculties consists of children of senior executives (for the sake of simplicity we shall speak of the "senior executive" group), while the smallest is the "farmer" group (63.5 per cent as against 83 per cent); the lines of the table are moreover arranged in descending order of Faculty enrolment percentages.

Another interesting figure is provided by taking the mean, denoting the rate of enrolment in a type of institution regardless

of social background. This is obtained, for example, by adding all the figures in the "Faculties" column, i.e. making 123,995, and computing the percentage in relation to the total number of 166,725 students. The mean enrolment rate in Faculties is therefore 74.4 per cent. By definition this mean is below the value for the group with the largest Faculty enrolment (senior executives: 83 per cent; mean : 74.4 per cent), and above the figure for the group with the smallest enrolment (farmers : 63.5; mean : 74.4 per cent).

YUGOSLAVIA

Table 1 : FULL-TIME STUDENTS BY SOCIAL BACKGROUND
AND BY TYPE OF INSTITUTION

	Faculties	Viša Škola	Colleges	Art Academies	TOTAL
Senior executives	26 606 83.0	4 187 13.1	587 1.8	661 2.1	32 041 100 (19.2)
Army - Police	9 362 82.1	1 765 15.5	157 1.4	120 1.1	11 404 100 (6.8)
Clerical workers	22 258 78.5	4 976 17.6	788 2.8	330 1.2	28 352 100 (17.0)
No reply	2 738 76.7	742 20.7	23 0.6	67 1.9	3 570 100 (2.1)
Other occupations and non-active population	12 200 75.9	3 099 19.3	591 3.7	182 1.1	16 072 100 (9.6)
Commerce occupations	5 264 75.1	1 525 21.8	966 2.4	52 0.7	7 007 100 (4.2)
Public-service occupations	1 644 69.8	644 27.3	34 1.4	33 1.4	2 355 100 (1.4)
Industrial workers	21 018 69.4	8 125 26.8	903 3.0	236 0.8	30 282 100 (18.2)
Transport occupations	4 279 67.8	1 801 29.0	170 2.7	30 0.5	6 220 100 (3.7)
Farmers	18 686 63.5	10 140 34.5	511 1.7	85 0.3	29 422 100 (17.6)
Total	123 995 74.4	37 004 22.2	3 930 2.4	1 796 1.1	166 725 100 (100)

Source : Statistical Bulletin, Belgrade, 1971, p. 670.

For all groups a "deviation from the mean" can thus be determined which will be positive, negative or nil : by definition the sum of the deviations will be equal to zero.

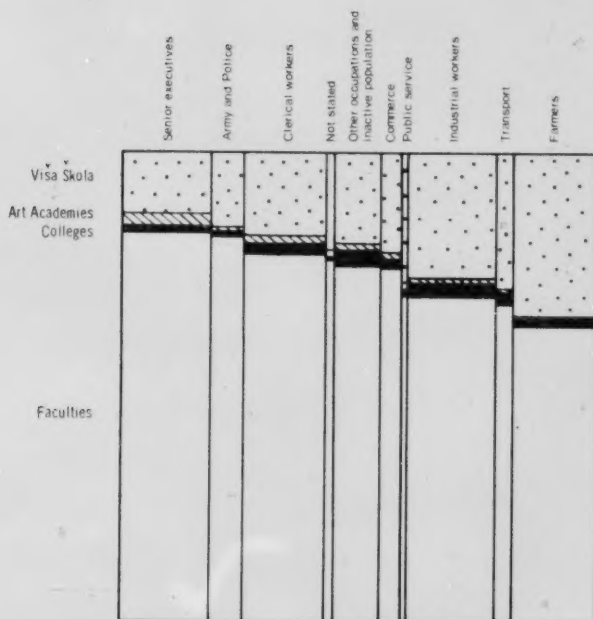
Deviations from the mean can be measured for all other types of institution - the Viša Škola, colleges and art academies. These deviations will serve to plot Table 1 according to a procedure which will often be used and is described in detail below :

- Figure 3, in terms of area, represents the total 166,725 students enrolled in full-time higher education during 1971. Each background category is represented by a rectangle whose base is proportional to numbers in the category : the senior executive group accounts for 19.2 per cent of the figure's breadth, since it represents 19.2 per cent of the population. This "senior executive" rectangle is subdivided into four categories which are proportional to the four types of institution attended. The length representing Faculties amounts to 83 per cent of the rectangle's total length, since 83 per cent of the senior executive group are enrolled in the Faculties. Other types of institution and other social categories are similarly plotted.
- If the Faculties are represented separately (Figure 4, upper profile), a stepped figure is obtained (since the categories have been plotted accordingly). The mean value can be shown (as a dotted line). Some groups appear above and others below this line.
- The same operation can be repeated for the Viša Škola : here, the "organ-pipe" figure is somewhat different from Figure 3, as all the rectangles have been lined up along their bases. It will be noted that some groups are above the mean and others below.
- With reference to colleges and art academies, it will immediately be apparent that :
 1. enrolments are small;
 2. all groups are close to the mean, indicating little social differentiation.
- A glance at the "Faculties" and "Viša Škola" profiles of Figure 4 shows that they provide two types of information :
 - regarding numbers enrolled by type of institution : there are more Faculty students than Viša Škola students, regardless of social background. This is shown in Figure 4 by the length of the "organ pipes" of the "Faculties" profile, which is greater than those of the "Viša Škola" profile;

Figure 3

YUGOSLAVIA

FULL-TIME STUDENTS BY SOCIAL BACKGROUND
AND BY TYPE OF INSTITUTION



- regarding the amount of differentiation according to social background : more "senior executives" enroll in universities than "farmers". This characteristic (which precisely is our present concern) is represented in visual terms by the positive or negative deviation from the mean, shown as a dotted line. Conversely, the Viša Škola profile shows that more "farmers" are enrolled than "senior executives" (1) in this type of institution. Since the upper part is our concern, henceforth this will be the only one used. This part is plotted (for the Faculties and Viša Škola only) in

1) If there were only two profiles, they would be absolutely symmetrical in construction.

Figure 4

YUGOSLAVIA

FULL-TIME STUDENTS BY SOCIAL BACKGROUND
AND BY TYPE OF INSTITUTION

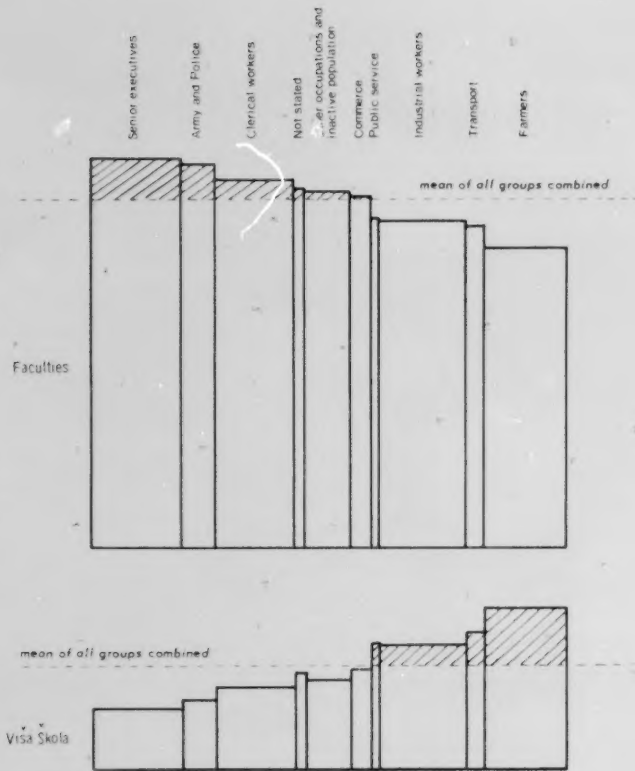


Figure 5. The shaded parts correspond to the relevant shaded sections of the previous figure located above the mean; the white rectangles below the horizontal line represent the amount of deviation by groups below the mean.

- The result finally obtained consists of two profiles providing the only type of information which concerns us, i.e. groups are differentiated from each other in terms of the type of institution attended. (1)
- If it is desired to retain the information showing faculty enrolments to be much higher than in the Viša Škola, it is only necessary to add to the two profiles Figure 6, in which enrolments (of whatever social background) by type of institution are represented in the classic "slice of cake" diagram. When read together the diagrams reconstitute all the information contained in Table 1, one showing the mean value for a type of institution and the other two the amount by which each social group deviates from the mean. (2)

If the two profiles of Figure 5 are now considered from a sociological rather than formal standpoint, the following comments are in order :

- "senior executive" enrolments are largest in Faculties and smallest in the Viša Škola (except for small groups, the two profiles are largely symmetrical, and will hence be examined together). The choice thus made by the group highest in the social scale denotes the degree of prestige attached to both such types of education : Faculties are regarded as offering prospects for a career enjoying considerable social status, and the Viša Škola as providing less highly esteemed job skills.
- The "army and police" group, which in Yugoslavia enjoys considerable status, behaves in much the same way as the "senior executives" group : these students enter Faculties rather than the Viša Škola.
- The next group is the "clerical workers" group : this usually consists of qualified non-manual workers with the same characteristics as the previous groups, although at a lower level.

1) It may be well to recall certain formal properties of this type of representation :

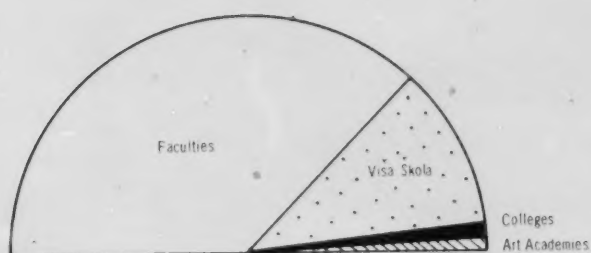
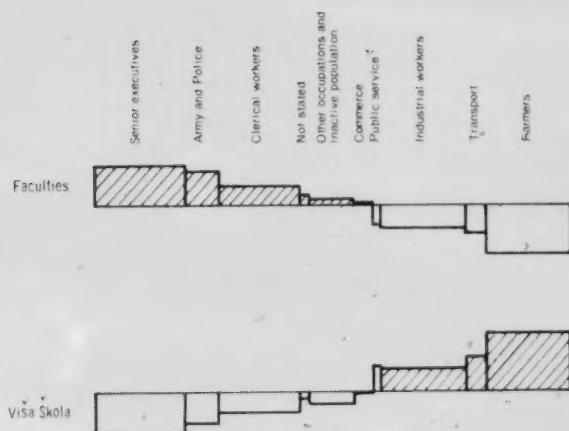
- differences are expressed in percentages;
- for any given profile, the sum of areas above the mean equals the sum of areas below;
- if all profiles are plotted, for any given group (e.g. "senior executives") the sum of positive differences equals the sum of negative differences.

2) For all information to be shown each profile must be represented.

Figures 5,6

YUGOSLAVIA

FULL-TIME STUDENTS BY SOCIAL BACKGROUND
AND BY TYPE OF INSTITUTION



- These are followed by the "not stated" and "other occupations and inactive population" groups. In theory they randomly belong to any other group. This is true if "omitted answers" are unbiased. (1)

The present statistics seem to show no bias. If failure to mention occupations is purely random, the mean position should match the whole of the group to which they belong. The figure should hence approach the mean, which is indeed the case :

- The "commerce" group, made up of all sorts of categories, is fairly close to the mean. Owing to its mixed character, the behaviour of this group is difficult to interpret.
- The first group to fall below the mean (where Faculties are concerned) is the "public service" group. This is a thoroughly mixed group, since it may include doctors as well as nurses' aids in a dispensary, and shoemakers as well as garbage collectors. As the lower-ranking categories are invariably the largest, on average their behaviour is much like that of the next or "industrial workers" group.
- The "industrial workers" group, which is large, proportionally prefers the Viša Škola to the Faculties. A first conclusion (although this is a question which will later be discussed at greater length) is that a child from a working-class background will naturally feel more at home in a short-cycle, practically-oriented course. On the other hand, from the standpoint of a more democratic higher education system, it may be considered disturbing that the type of institution selected should depend on social background.
- Next to "industrial workers" comes "transport occupations", largely filled by manual workers.
- The last group is the "farmers" group, which is large. Compared with the "senior executives" group, a 20 per cent difference will be noted : as against only 13.1 per cent of "senior executives", 34.5 per cent of "farmers" send their children to the Viša Škola. Farmers therefore behave in much the same way as industrial workers.

To sum up, the relevance of the contrast between manual and non-manual workers' choice of a higher-education establishment will be readily apparent. The difference seems to be connected with one

1) Many surveys do show that failure to state the occupation is biased, and that such cases should be ranked among the lower population strata, the subject "omitting" to answer because he considers his occupation as being socially inferior.

of social prestige. Non-manual workers thus usually send their children to the Faculties, i.e. into long-cycle higher education, while those of manual workers more often enrol in short-cycle institutions, i.e. the Visa Skola.

Differences according to sex in the choice of studies

In 1971, female students accounted for 41.3 per cent of the total student force in higher education. Considered over a four-year period, the rate will be seen to have risen slowly but steadily. If rates of female enrolments are however examined by types of institution (Table B in annex and Figure 7), it will be noted that differences according to sex tend to decrease over time in the various types of institution (except in colleges, where male students predominate). (1)

In 1971, 58.3 per cent of students in the Visa Skola were male and 41.7 per cent female. The distribution by sex, however, differs according to the sector of activity for which the student is being trained. Table 2 shows percentages for each sex according to departments : these have been ranked by order of sector of activity (primary : agriculture; secondary : technical education; and tertiary : services), and, in each sector, by decreasing order of percentages for male students : Figure 8 plots deviations from the mean in each department for male students. (2)

It will be immediately apparent that differences between departments may be marked : 8 male students for every 2 female in technical education (which trains technicians and "production" engineers), as against 8 female students for every 2 male in the department preparing for the medical professions (nurses).

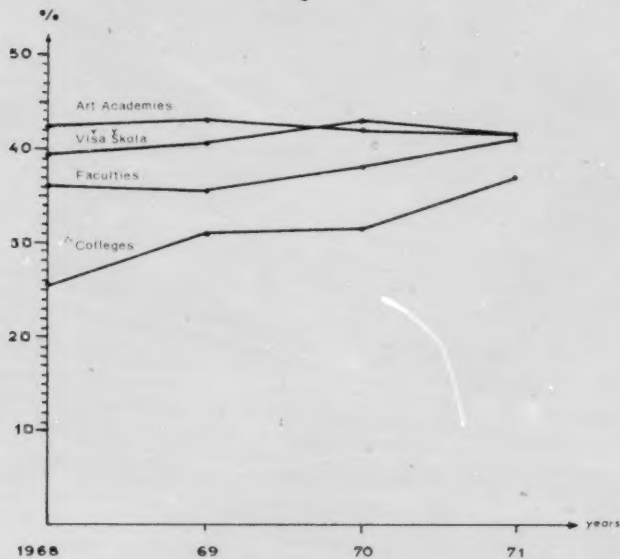
Upon examining sectors of activity, it will be seen that the primary sector (agriculture) and secondary sector (technical education) have far more male than female students. Such courses, in fact, correspond to occupations mainly filled by men. In the tertiary sector, vastly different situations may arise; thus, by decreasing order of percentages for male students, will be found :

-
- 1) As is often the case in all countries for schools enjoying a high degree of prestige, in which competition is keenest, and which closely reflect conditions in working life, where posts requiring high qualifications are more often held by men than women.
 - 2) The figure for female students will be exactly symmetrical along the horizontal axis.

Figure 7

YUGOSLAVIA

PERCENTAGE OF FEMALE STUDENTS IN DIFFERENT TYPES OF INSTITUTION



- two types of training directly linked to production activities, which hence are mainly chosen by male students : organisation of production and transport (9 male students for every female);
- three types of course located along the mean corresponding to management personnel : law and public administration, economics and statistics. Male and female students are enrolled in equal numbers.
- Teacher training, in which the number of female students substantially increases (6 females for every 4 males, as against an average of 6 males and 4 females for all departments combined of the Viša Škola). Teaching staff in the lower grades will thus be seen to consist largely of women.
- The sectors occupied mainly by females are those training welfare workers or medical personnel, i.e. for such largely feminine occupations as welfare officer and nurse.

YUGOSLAVIA

Table 2 : VIŠA ŠKOLA 1970-1971
Distribution of students by sex and by department

Departments	Sex		Total
	Male	Female	
Agriculture	83.5	16.5	100 1 830 (2.3)
Technical education	83.0	17.0	100 16 825 (20.8)
Organisation of production	91.3	8.7	100 1 790 (2.2)
Transport	90.6	9.4	100 3 750 (4.6)
Law and public administration	61.8	38.2	100 6 190 (7.6)
Economics	53.0	47.0	100 20 895 (25.8)
Statistics	50.3	49.7	100 376 (0.5)
Teacher training	43.0	57.0	100 24 331 (30.0)
Social workers	31.7	68.2	100 2 213 (2.7)
Medical professions	17.4	82.6	100 2 874 (3.5)
Total	58.3	41.7	100 81 074 (100)

Source : Yugoslav Statistical Yearbook, 1971.

Entry into working life of Viša Škola graduates

It must first be pointed out that Viša Škola graduates as yet form a small part of the working population, since in 1968 they only amounted to some 3 per cent, but that they are progressing each year faster than other categories of the labour force. (1)

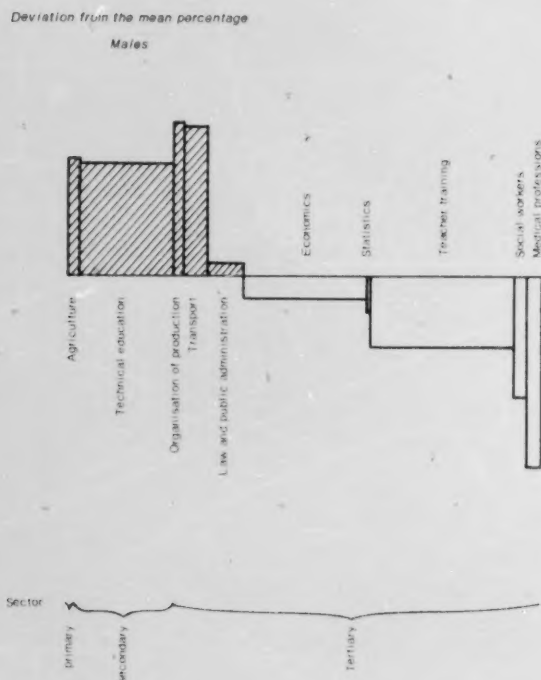
1) See figures in Short-Cycle Higher Education, op. cit., p. 196 et seq.

Figure 8

YUGOSLAVIA

VIŠA ŠKOLA 1970-1971

Distribution of students by sex and by type of institution



If this general growth is broken down by types of study, it will be noted that the department expanding most is technology and engineering : at the present time middle-level production staff is in greatest demand. Then come the departments preparing for the medical professions, agriculture and teaching, which are growing at a moderate rate. The only diminishing sector is that preparing for social work, where a certain amount of saturation appears to have set in. Thus, if the number of unemployed graduates from Viša Škola in 1970 is compared with the number of graduates in 1969, (1) the following percentages by departments are obtained :

1) Ibid., pp. 169 and 200.

Technical and engineering	15 per cent
Teacher training	20 per cent
Public administration	24 per cent
Economic and commercial	28 per cent
Social work	40 per cent
Other institutions	34 per cent
All departments combined	28 per cent

On average, therefore, and taking these figures as rough indicators owing to the particular difficulty of drawing up unemployment statistics and the fact that unemployed graduates in 1970 may well have graduated earlier than 1969, the following comments can be made :

- apart from the case of future teachers, it will be noted that the growth rate for unemployment matches the growth rate for female students. For example, graduates from technical education, where males are in the majority, experience little unemployment, which may be simply due to the time needed for finding a job. At the other extreme, preparation for social work, where there are 7 male students for every 3 female, leads to an unemployment rate of 40 per cent. The inference (subject to the usual reservations, since unemployed graduates are not broken down by sex) is that women have more trouble than men in finding employment despite their diplomas. It is exceedingly difficult to interpret these data, and the most one can do is to suggest the following hypothesis : the social development of female employment would not seem to have reached a stage where it meets the expectations of young women who have trained for a profession where no opening is guaranteed. This situation in higher education, especially where the social sciences are concerned, is fairly general throughout the developed countries.

Future teachers are a case apart : the profession, at least at primary level, contains large numbers of women. Since the demand for teachers is still high, there should not normally be any undue amount of unemployment after this training, even allowing for the large number of female students.

Types of attendance

One of the aims in establishing Viša Škola was that people in working life should be able to acquire a higher education. To this end part-time courses were encouraged and have been developed to a fairly considerable extent, with over half (53 per cent) of Viša Škola students enrolled in part-time courses in 1971 as against only 18 per cent of Faculty students. Figure 9 shows the situation in 1971

according to sex : in both cases, little difference will be noted in the behaviour of both sexes. Many women, as well as men, attend part-time courses at the Viša Škola, while few do in the Faculties.

If trends in part-time enrolments are considered, the situation will be seen to have changed little since 1968, but before this date the percentage of part-time enrolments in the Faculties had greatly decreased. Thus, in 1962, 56 per cent of students were enrolled part-time in the Faculties as against 31.5 per cent in 1968, whereas the proportion in the Viša Škola was 42 per cent in 1962 and 64 per cent in 1968. The Viša Škola have therefore specialised in this type of enrolment. In latter years the downtrend in Faculty part-time enrolments (and the rising trend in the Viša Škola) has only been true for men : the proportion of women attending part-time courses in Faculties appears to be increasing slightly (1968 : 4.8 per cent; 1971 : 8.7 per cent). (1)

Educational background

With reference to their secondary education, two-thirds of students in the Viša Škola come from technical and vocational schools, and one-third from grammar schools. (2)

II. HIGHER EDUCATION IN GREAT BRITAIN

Higher education in Great Britain takes place in three different types of institution : universities, colleges of education (where teachers are trained) and the further education colleges. (3) Since 1966, this last category has been subdivided into polytechnics and other lower-level colleges providing vocationally oriented education ranging from simple apprenticeship to very advanced courses, as in the polytechnics.

In order to have an idea of the numerical importance of each type of institution isolating the differences due to length of studies, we may consider the distribution of "entrants" into higher education, or in other words, see what has become of the previous year's secondary school leavers.

1) Source : Yugoslav Statistical Yearbook, 1971, p. 294.

2) See Short-Cycle Higher Education, *op. cit.*, p. 189.

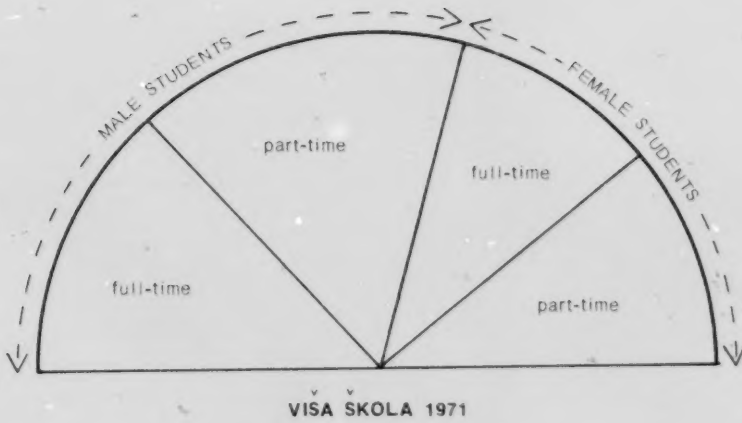
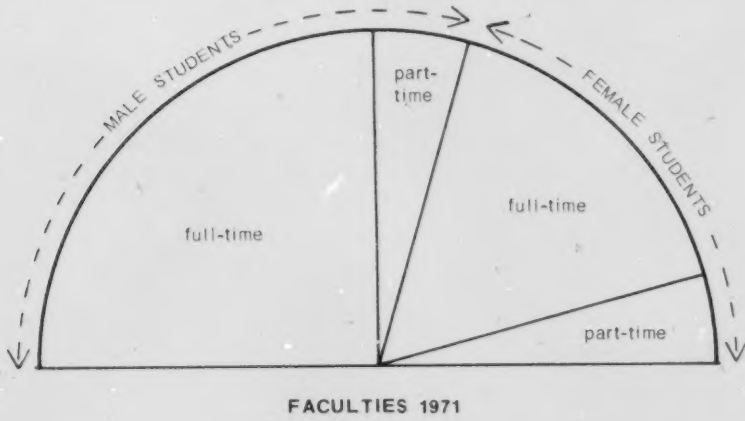
3) Cf. G. Williams and A. Crampin, "Teachers in non-university higher education. A British Case Study", in Short-Cycle Higher Education, *op. cit.*, pp. 235-262.

T. Burgess and J. Pratt, Technical Education in the United Kingdom, OECD, 1971.

Figure 9

YUGOSLAVIA

DISTRIBUTION OF STUDENTS BY TYPE OF ATTENDANCE,
BY SEX AND BY TYPE OF INSTITUTION



ENGLAND AND WALES

Table 3 : DISTRIBUTION OF SECONDARY SCHOOL LEAVERS' (1967-1970)
ENTERING DIFFERENT TYPES OF POST-SECONDARY EDUCATION
(advanced courses only)

Universities				Colleges of edu- cation	Poly- technics	Other post- secondary institu- tions	Total
Oxford Cambridge	London	Other	Total				
6.2	7.4	41.1	54.7	31.3	8.9	5.1	100 = 63 900

Source : Statistics of Education, 1970, vol. 2, pp. 8-9.

Figure 10

ENGLAND AND WALES

DISTRIBUTION OF SECONDARY SCHOOL LEAVERS (1969-1970)
ENTERING DIFFERENT TYPES OF POST-SECONDARY EDUCATION
(advanced courses only)

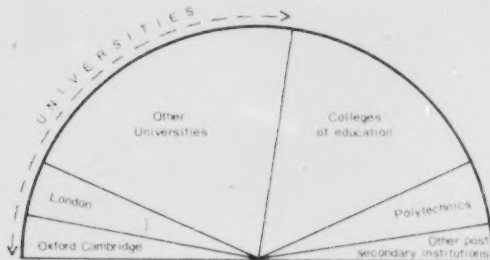


Table 3 and Figure 10 show this distribution (excluding those in employment), but the statistics are nevertheless distorted by the fact that many students entering the polytechnics have already spent some time in a job. The figures must therefore be adjusted, and we may note that in 1969-1970 (1) the universities had a total of 200,000 students and the polytechnics 150,000, so that they were numerically comparable.

1) Hereafter used as the reference year, except where otherwise stated; data relate to England and Wales.

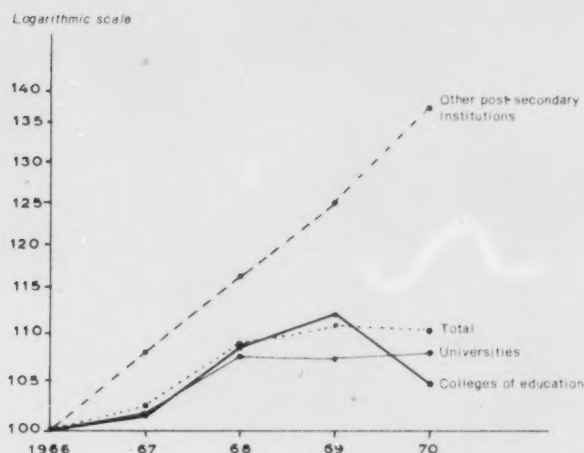
In order to understand the present situation, we must rapidly review the previous development of technical education. Technical colleges were originally established to meet local needs, and under the pressure of demand from industry and commerce this type of education expanded very rapidly.

If we compare the numerical increase in higher education students since the war, we see that the highest increase was in technical education. Figures since 1966 (1) (cf. Table C annexed, and Figure 11) show that the annual average increase was only about 2 per cent for universities as against over 8 per cent for non-university higher institutions.

Figure 11

ENGLAND AND WALES

GROWTH OF SECONDARY SCHOOL LEAVERS ENTERING
DIFFERENT TYPES OF POST-SECONDARY EDUCATION (1966-1970)
(advanced courses only)



1) In view of institutional changes, it is difficult to make comparisons with earlier years.

The demand for qualified manpower as a result of industrial and scientific progress led to more advanced courses; certain "regional" colleges specialised in advanced work, attracting a large number of full-time students (in contrast to technical education, which has a lot of part-time students). Accordingly, the prestige of these institutions increased rapidly. With expanding numbers and growing prestige, ten of these regional colleges were designated Colleges of Advanced Technology in 1956. Their autonomy gradually increased, and ten years later they became universities.

This process of increasing autonomy in a branch of education previously designated to supply manpower for industry and the service sector had a number of disadvantages : universities are free to choose their own curricula and the training they give is not necessarily suited to requirements. As they are strongly selective, many capable students are unable to obtain a place.

In order to prevent a recurrence of this process, the Government created the new polytechnics in 1966 out of thirty regional colleges which had not become Colleges of Advanced Technology. The polytechnics are under the control of the Council for National Academic Awards (CNAA) which checks the level of instruction, decides on the advisability of instituting new courses and seeks to ensure optimum distribution of courses. It is official policy that the polytechnics should have the same level and prestige as the universities while being more vocationally oriented.

There is thus a binary system of higher institutions more or less comparable in size and level :

- the universities (old universities and former Colleges of Advanced Technology); these are financially independent (funds are allocated by a national agency) and award their own degrees and arrange their own courses;
- the polytechnics depend on the local authorities for financing and on the CNAA for validation of courses and degrees. New courses are more related to economic needs; technology and commerce are therefore the main subjects.

Entrance requirements for higher education institutions

In principle, the scholastic requirements for entrance to a university or a polytechnic are the same : the candidate must have obtained "A" levels in two subjects at his secondary school ("A" Advanced as opposed to "O" Ordinary). But this is not enough in view of the severe selection practised by higher institutions in Britain; consideration is also given to the school record, possibly including the secondary teachers' recommendation, and an interview throws

light on the student's motivations. (1) In other words, three factors are taken into consideration for entrance to higher education :

- previous level of attainment (2 "A" levels)
- type of previous institution (school record)
- candidate's motivations and general appearance (interview).

It is interesting to observe, however, that despite this theoretical uniformity between universities and polytechnics, each type of institution has a different student population.

1. In the first place, there is a difference in scholastic attainment.

ENGLAND AND WALES

Table 4 : LEVEL OF ATTAINMENT OF SECONDARY SCHOOL LEAVERS
IN 1969-1970 ENTERING DIFFERENT TYPES
OF POST-SECONDARY EDUCATION
(advanced courses only)

Number of "A" levels	Univer- sities	Poly- technics	Other post- secondary institu- tions	Colleges of Edu- cation	Total
0	3.9	1.8	5.7	88.6	100 (6.9)
1	2.3	11.2	8.4	78.2	100 (11.4)
2	30.7	16.6	9.1	43.6	100 (23.5)
3 and more	83.1	5.8	2.5	8.6	100 (58.2)
Total, all levels combined	56.1	8.7	4.9	30.3	100 (100) = 65 940

Sources : Statistics of Education, 1970, vol. 2, pp. 28-29.

Table 4 gives attendance percentages by type of institution for a given level of attainment. Figure 12, which is derived from it, emphasises a few points :

- the universities mainly recruit students above the level required : about three-quarters of those with three "A" levels go to university as compared with a quarter of those with the minimum level;

- 1) Selection for Oxford and Cambridge also includes an entrance examination.

- in contrast, about nine out of ten students with no "A" levels go to the various technical colleges other than the polytechnics. The purpose of this type of institution is clearly shown : preparation for working life of students of mediocre ability who nevertheless want to acquire a vocational training;
- polytechnics, teacher training and "other institutions" recruit at a slightly lower level since they contain over half the students with 1 or 2 "A" levels. It should be noted, however, that the initial attainment level of polytechnic students is higher than that of college of education students.

If we consider the level most frequently represented in a given institution, we find the following order :

Universities : 3 and more "A" levels

Polytechnics and other technical institutions : 2 "A" levels

Colleges of Education : 1 "A" level

Other higher (technical) institutions : 0 "A" level

Obviously, this reflects the prestige pyramid for these various institutions : insofar as there is competition for entry to an institution, those whose level of attainment is above the minimum required are most likely to succeed.

2. Type of previous institution

Table D (annexed) gives the percentage of entrants to a particular post-secondary institution by school background. The table has been arranged in order of size of university attendance, with "Independent" schools at the top; 73.4 per cent of their pupils (of those going on to post-secondary education) go to the university, whereas only 12.4 per cent of pupils of "Modern" schools (entering post-secondary education) go there.

Figure 13 shows that the university intake consists mainly of students from Grammar Schools, Direct-Grant Schools and Independent Schools, while the colleges of education recruit mostly from Comprehensives, other secondary schools and even from Modern schools.

In the polytechnics and other institutions, students are drawn from all secondary schools more or less in proportion to their numerical importance, with a slight preference for Comprehensive and Grammar Schools.

A comparison may be made between Figure 14 which shows the school background of students entering higher education, and Figure 15 which shows the school background for all-secondary school leavers. Figure 15 covers those entering employment as well as those going on to post-secondary education.

Figure 12

ENGLAND AND WALES

LEVEL OF ATTAINMENT OF STUDENTS ENTERING DIFFERENT TYPES
OF POST-SECONDARY EDUCATION (1969-1970)
(advanced courses only)

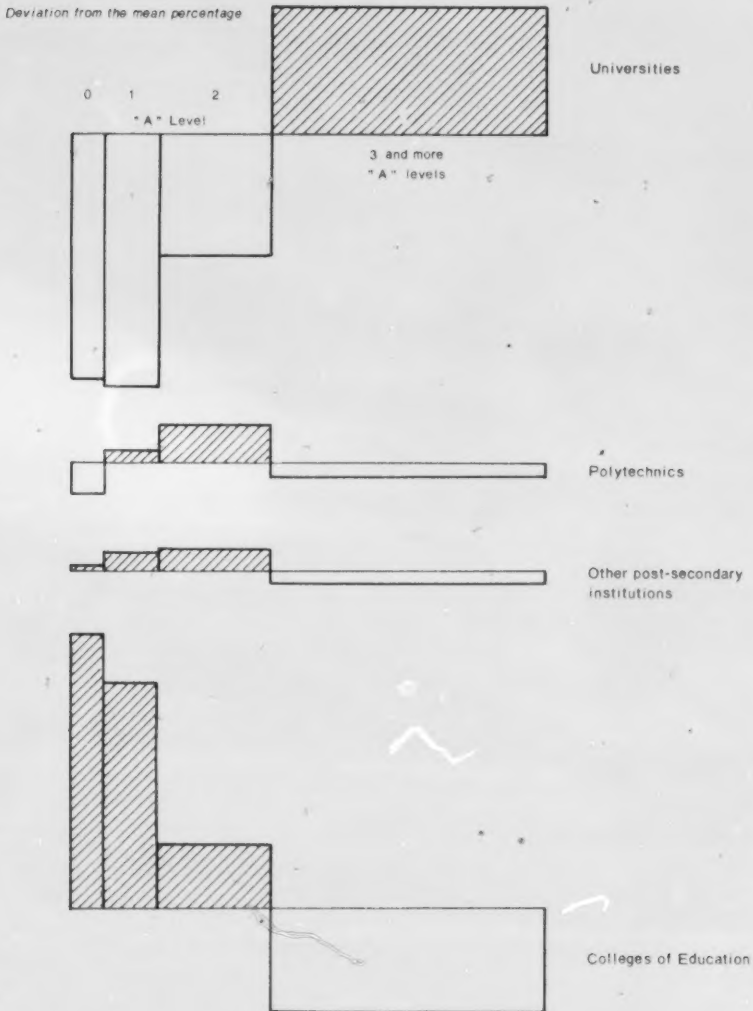


Figure 13

ENGLAND AND WALES

SECONDARY SCHOOL BACKGROUND OF STUDENTS ENTERING
DIFFERENT TYPES OF POST-SECONDARY EDUCATION (1969-1970)

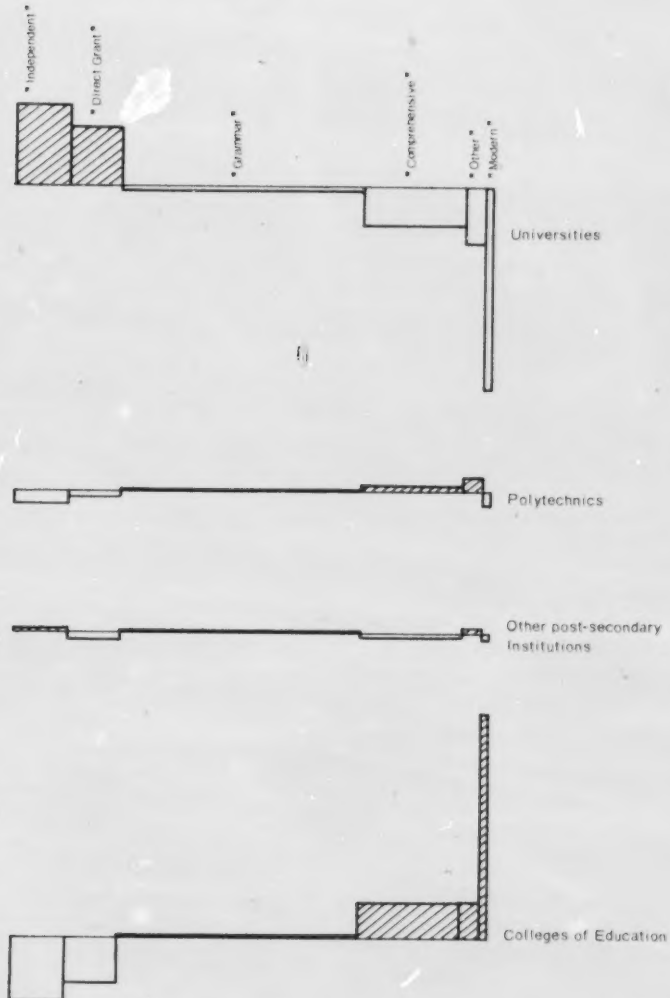


Figure 14
ENGLAND AND WALES
 SCHOOL BACKGROUND OF SECONDARY SCHOOL LEAVERS
 (1969-1970)

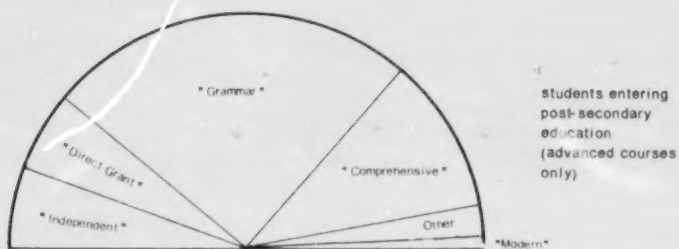
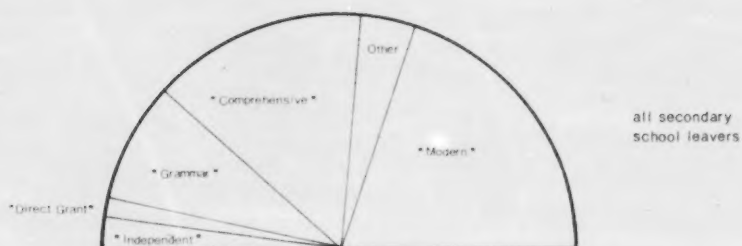


Figure 15



The group showing the greatest decrease between Figure 14 and Figure 15 is that going mainly to the university : this means that there is over-representation of the schools leading to the highest prestige education. Three types of secondary school - Direct Grant, Grammar and Independent schools - provide education for an elite preparing for the most highly prized form of higher education. Conversely, it is clear that Modern schools send their students mainly into employment or lower-level technical education. Former pupils of Comprehensive schools go either to prestige institutions of higher education or to technical education or take up employment.

3. Social background

The distribution of students by school background and level of attainment shows the existence of educational paths of unequal prestige : a possible assumption is that the paths are related to the students' social background. (1) If we take the father's occupation as an indicator of social background, the available data permit a rough verification of this assumption.

Data in this field are rather scanty : they come from sample surveys and sometimes results can only be obtained by grouping occupations into the two broad categories of manual and non-manual workers.

Table E (annexed) gives an indication of the problem. (It will be seen that there are no data for polytechnics; the first survey made in this type of establishment is the one we shall discuss later).

Figures 16 to 19, based on Table E, lead to the following conclusions :

- From 1961 to 1971, there was no appreciable democratisation of the university; the proportion of students of "manual" background was still about 3 in 10, whereas the corresponding proportion in the active population was about two thirds (cf. Figure 19 : Census data on the active population). This fact is all the more remarkable since the period 1961-1971 saw the inclusion in the universities of the Colleges of Advanced Technology which had a slightly larger proportion of students from the "manual" sector than the old universities. It may be assumed that as the old universities tightened up their entrance criteria when the number of applicants increased and the number of places failed to increase proportionately, they also practised stricter social selection.

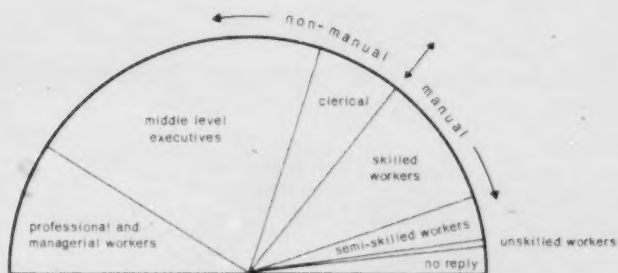
1) When we talk of "path", we are pointing out a phenomenon - we do not claim that the path is exclusive. For instance, if 2/3 of Grammar School pupils transfer to the university/teacher training/polytechnic sector, there will nonetheless be 1/3 who go into lower-level technical education.

Figures 16, 17, 18, 19

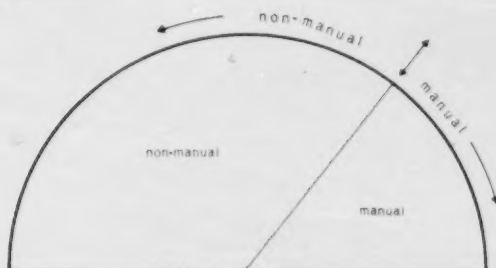
GREAT BRITAIN

DISTRIBUTION OF STUDENTS BY SOCIAL BACKGROUND
AND BY TYPE OF INSTITUTION

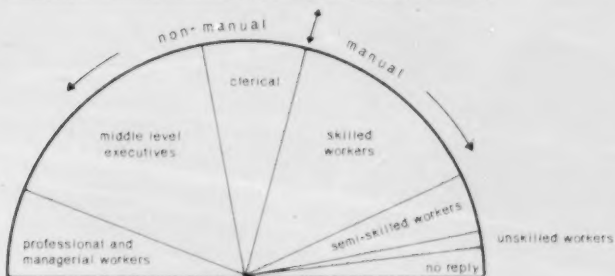
Universities
1961



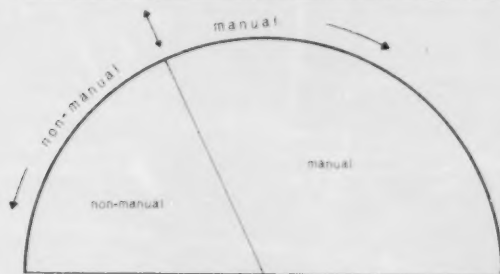
Universities
1971



Other post-secondary
institutions
1961



Active population
men
1966



- In non-university higher institutions - i.e. Colleges of Education, the old Colleges of Advanced Technology (still functioning as such in 1961) and all the other technical colleges - there is a higher proportion of students of more modest social background : 42 per cent (against 29 per cent in the university). This percentage is an institutional mean and may legitimately be said to cover widely differing cases, e.g. :
- in the Colleges of Advanced Technology, the intake is fairly similar to the university intake (though of slightly lower social level);
- the intake of lower-level technical colleges is generally drawn from lower social levels;
- an intermediate situation prevails in the colleges of education and the intermediate regional colleges.

These preliminary analyses of conditions of access to higher education enable us to draw a few conclusions and above all to pose questions which may usefully be explored later.

It is immediately obvious that there is a link between social background, level of attainment, at the end of secondary school, and the type of higher institution attended. Prestige institutions are attended by students with a high level of attainment and a high social background coming from secondary schools with the highest reputation.

These findings are already familiar, but they raise questions which we shall try to answer later : in particular, what about differences by sex ? Does male behaviour differ from female behaviour ? Do the level of attainment and the age of attaining it have any influence ? These are the questions we shall try to answer in the case of the polytechnics while studying the behaviour of homogeneous groups for a few variables (in the preceding statistics we could study the influence of the different variables only successively and not together).

Choice of institution according to sex

Sex seems to be an important differentiating factor in the choices of secondary school leavers : while the mean for all types of institution combined is fairly close to 50 per cent (cf. Table F annexed) it covers different realities, as may be seen from the institutional distribution by sex. Figure 20 represents deviations from the mean for the male sex (1) and shows that the institutions with the highest proportion of male students are the universities

- 1) The profile for the female sex would be strictly symmetrical.

and the polytechnics which account for two-thirds. This may be attributed to the fact that there is severe selection for entrance to these institutions. It is significant that of 100 boys with 2 "A" levels, 37 go to the university, whereas only 13 out of 100 girls in the same situation are admitted. Even for a higher level of attainment (3 and more "A" levels) the same phenomenon occurs (83 per cent, against 70 per cent). Here we find the same relation as in the Yugoslav example between the institutions' high prestige, their strongly selective admission procedures and the preponderance of male students. This relationship within the educational system corresponds to the very high proportion of men at all levels of responsibility in active life in general.

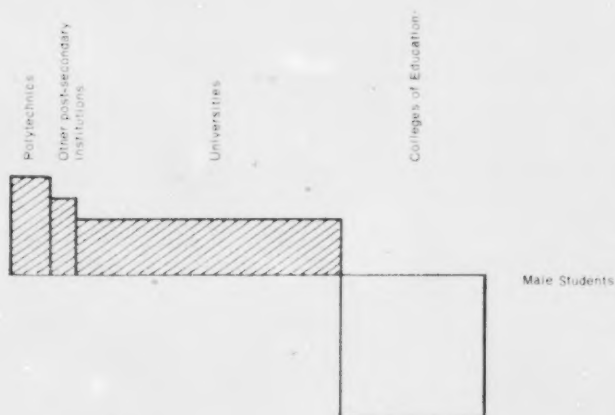
In colleges of education, however, female students are more numerous than male. Among potential teachers the proportion of female students is very high (78 per cent), as in many other countries. Again as in other countries, the massive expansion of education has led to a substantial increase in the teaching body, but also in the proportion of women teachers, with a consequent decline in its prestige.

Figure 20

ENGLAND AND WALES

SECONDARY SCHOOL LEAVERS IN 1969-1970 ENTERING POST-SECONDARY
EDUCATION, BY SEX AND BY TYPE OF INSTITUTION
(advanced courses only)

Deviation from the mean percentage



Distribution of students in polytechnics by course and sex

We shall continue to examine the influence of sex on choices of different types of education, but shall now focus on polytechnics in particular. We shall look at all polytechnic students and not just entrants.

Our first observation (cf. Table G annexed and Figure 21) concerns the average percentage of each sex; female students in all polytechnics represent only 15 per cent of enrolments whereas they accounted for 35 per cent of direct entrants from secondary schools. This indicates that more men than women come to polytechnics after having been in employment.

In Table G, the departments have been arranged in order of importance of their male students : Figure 22 shows the proportions of male students in a particular department, but also gives an idea of the numerical importance of each department.

The only department leading to employment in the secondary sector is technical education : it is the largest department since it contains over one-third of polytechnic enrolments and it is also the department with the largest number of male students (99.1 per cent of enrolments). This department provides advanced technical education : the most popular courses are engineering, electrical engineering, mechanical engineering and technology (building, printing, metals). All the occupations to which they lead are eminently masculine vocations and it is not surprising that men predominate.

The other departments lead to occupations in the tertiary sector : the department with the largest number of students is "administrative, business and social studies", grouping one-third of polytechnic enrolments, out of which 14.2 per cent are women.

The other departments are much smaller numerically and contain proportionately more female students :

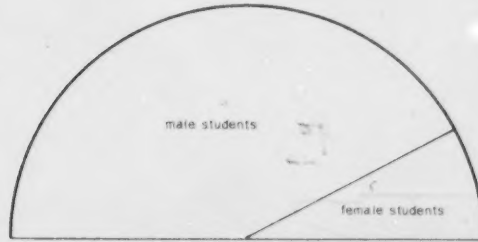
- science (pure and applied) : the most popular subject is mathematics, where the proportion of female students is 15.6 per cent;
- architecture and services (mainly architecture). The proportion of female students is 18.3 per cent;
- artistic studies : 46.5 per cent female students;
- medical studies : 48.3 per cent female students;
- teacher training : 58.7 per cent;
- languages: 60.3 per cent female students.

These last four departments (grouping about 12 per cent of all polytechnic students) have a fairly high proportion of women; they lead to the artistic and literary professions, nursing and teaching, all professions which recruit a large number of women.

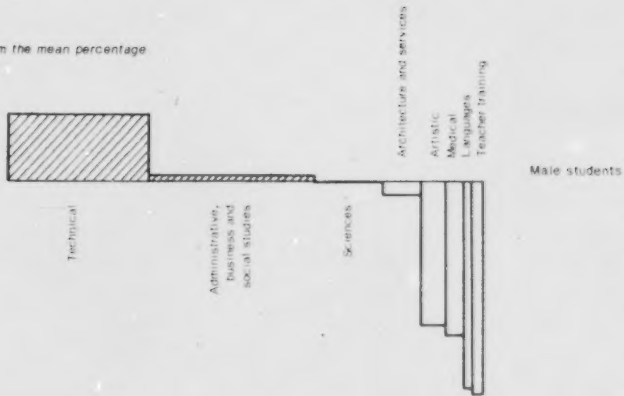
Figures 21,22

ENGLAND AND WALES

STUDENTS IN POLYTECHNICS BY SEX AND BY DEPARTMENT



Deviation from the mean percentage



Type of attendance

When the polytechnics were set up, one of the explicit objectives was to enable youngsters already in employment to continue their studies. In 1970 this objective was still regarded as valid, since nearly two-thirds of students are part-time, i.e. they also have a job.

Without going into the complexity of the British system, we may distinguish four main categories of students attending polytechnic courses :

- full-time students following an ordinary course (27 per cent);
- full-time students following a sandwich course (14 per cent); here, long periods of full-time education (one half of an academic year) alternate with experience in industry;
- part-time students (wage-earners) following day courses : some firms release students one or two days a week. These students may also follow some of the evening classes as well. This category also covers students following short full-time courses lasting from a few days to a week : this is the block release system (percentage for total day courses : 32.5 per cent);
- part-time students following evening courses (only 26.1 per cent).

In Table 5 below, "part-time" covers the various forms of day courses.

If we compare mean percentages (for any age and sex) for polytechnics with those for universities (Table 6) we find that the universities do not cater for part-time students, but leave them to the polytechnics; in the universities only one student in ten is part-time, whereas in the polytechnics the proportion is six in ten (cf. Figures 23 and 24).

So far, we have considered only mean percentages taking no account of age and sex; Table 5 and Figure 25 (cf. below) show that these two variables play an important role in the various types of attendance.

In general, female students prefer full-time attendance. 47 per cent of total female students in polytechnics attend full-time, compared with 23 per cent of male students. For both sexes, age also seems to play an important role as this type of attendance is naturally preferred by the youngest age group (20 or under); 65 per cent of female students aged 20 or under, and 32 per cent of male students of the same age enrol in full-time courses. The explanation is fairly simple, especially for female students; being young and with no family responsibilities, they are not obliged to

find a job. As regards male students (we saw that even the youngest choose full-time studies less frequently than female students) two types of hypothesis may be postulated (we shall try to verify them later) : either they are forced more often than females to take a job, or in view of their preference for technical studies, they are also led to prefer other types of course, e.g. sandwich courses linking study and industrial experience. The overall statistics available lead us to favour this second hypothesis.

Sandwich courses are chosen most frequently by male students aged 20 or under (23 per cent - the highest percentage for sandwich courses). These youngsters do not feel any pressing need for a paid job, but are drawn into occupational activity through their industrial experience.

ENGLAND AND WALES

Table 5 : STUDENTS IN POLYTECHNICS BY TYPE OF ATTENDANCE,
BY SEX AND BY AGE (1969-1970)

Sex and age	Full-time	Sandwich	Part-time	Evening classes only	TOTAL
<u>Male</u>					
Age 20 and over	31.9	22.8	38.3	7.0	100 37 393 (26,0)
21 and over	19.3	12.5	34.0	34.3	100 81 256 (56.4)
<u>Female</u>					
Age 20 and over	64.7	10.1	15.9	9.3	100 10 793 (7.5)
21 and over	33.8	2.5	21.9	41.9	100 14 626 (10.2)
Total all groups combined	27.4	14.0	32.5	26.1	100 144 068 (100)

Source : Statistics of Education, 1970, vol. 3, pp. 4-5.

ENGLAND AND WALES

Table 6 : STUDENTS IN UNIVERSITIES BY TYPE OF ATTENDANCE (1969-1970)

Full-time	Sandwich	Part-time	TOTAL
85.0	5.4	9.6	100 203 873

Source : Statistics of Education, 1970, vol. 6.

Figure 23

ENGLAND AND WALES

STUDENTS IN POLYTECHNICS BY TYPE OF ATTENDANCE (1969-1970)

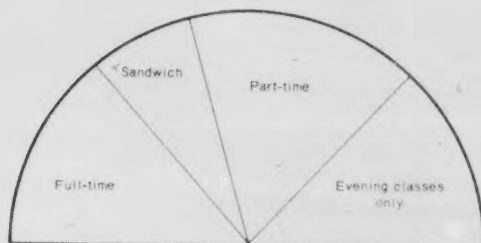


Figure 24

ENGLAND AND WALES

STUDENTS IN UNIVERSITIES BY TYPE OF ATTENDANCE (1969-1970)



As in the case of full-time courses, sandwich courses are chosen more often by students under 20 than by older students. This is the case for both sexes, but contrary to the previous case, the proportion is higher for males than for females.

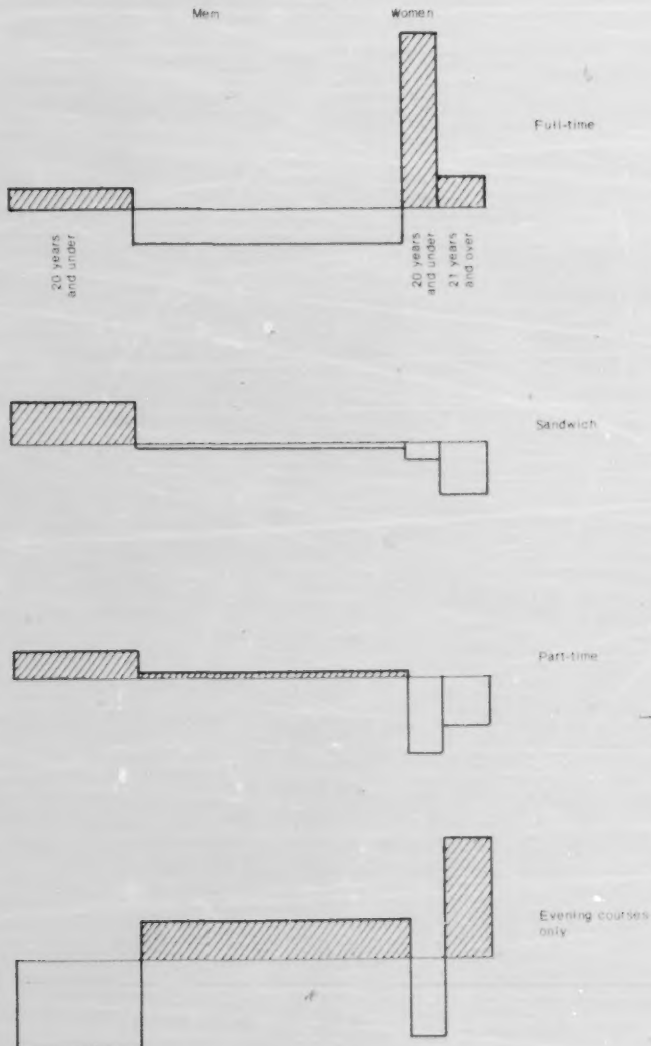
Part-time courses - block release or day release - imply a fairly flexible occupational commitment; it is not surprising that

Figure 25

ENGLAND AND WALES

STUDENTS IN POLYTECHNICS BY TYPE OF ATTENDANCE AND BY AGE (1969-1970)

Deviation from the mean percentage



the largest category represented is male students under 20 (38 per cent). These are youngsters who wish to combine study and employment without requiring a full-time job, as they probably have no family responsibilities.

Evening classes, which are the necessary counterpart to full-time paid employment, are mainly followed by older students of both sexes (42 per cent women, 34 per cent men); this method is very demanding and only strongly motivated persons can succeed with it. Dropouts are numerous. For such students, the occupational commitment is not just a "trial run" as in the case of sandwich courses; it is a full-time job undertaken more from necessity than from choice, in view of the study difficulties it generates.

III. HIGHER EDUCATION IN FRANCE

In this section, we shall consider higher education as all post-secondary education, i.e. after the Baccalauréat. While success in the Baccalauréat is not absolutely essential for admission to post-secondary education, only a very small number enter through the special examinations or equivalent requirements.

Post-secondary education is provided in a number of establishments of varying size. Firstly, we may distinguish between universities and other institutions :

- universities account for the majority of post-secondary enrolments (about 80 per cent, cf. Table 7 below). University enrolment is open to all holders of the Baccalauréat and there is no selection procedure.

Within the university, the distribution among the various disciplines is uneven (cf. Table 4 annexed and Figure 26). Arts and human sciences account for over one-third of the students, followed by law and economics (23 per cent), medicine and dentistry (19 per cent), science (18 per cent) and pharmacy (4 per cent) respectively.

The university is generally criticised for not being vocationally oriented and turning out graduates who, even after long-cycle studies, swell the ranks of the unemployed. This reproach does not apply to medicine, where a competitive examination at the end of the first year enforces a "numerus clausus", nor to pharmacy, but more particularly to arts and human sciences, law and economics. A recent study (1) shows, however, that four years after graduating, only 1 per cent of men and 2 per cent of women were looking for

1) Philippe Vrain, Les débouchés professionnels des étudiants, Paris, P.U.F., 1973. Covers students in arts, law, economics, institute of political studies, major commercial colleges.

employment, 84 per cent of graduates were in employment, and the remainder were either doing their military service (men) or did not wish to work for various reasons (5 per cent of the women).

FRANCE

Table 7 : ENROLMENTS IN POST SECONDARY EDUCATION (1972)

Institutions		%
Universities *	641 600	77.8
University Institutes of Technology (IUTs)	32 000	3.9
Higher technician sections	26 500	3.2
Preparatory classes for the grandes écoles	31 400	3.8
Teacher training	17 500	2.1
Engineering colleges **	25 000	3.0
Other colleges **	50 000	6.0
Total	824 000	100

* Excluding "grandes écoles" students enrolled at the university.

** Estimate.

Sources : Tableaux de l'Education nationale, édition 1973.
Statistiques et sondages, doc. N° 4 314.

Note that 86 per cent of all arts graduates in employment are engaged in teaching :

- non-university institutions cover a fairly varied field and may be grouped in three main categories : technical education, teacher training, the various colleges and the classes preparing for them.

1. Unlike the universities which provide long-cycle education (four years), (1) technical education is a short-cycle covering the

- 1) As the dropout rate is particularly high in the universities, since only about 50 per cent of first-year students obtain the final diploma, an attempt was made to reform the examination held at the end of the first two years of study. This was the institution of the DEUG (Diploma of General University Studies) which was to enable students not wishing to follow a long course to obtain a national diploma of recognised value giving them direct access to the labour market. In fact, there is still no specifically vocational training and, at best, holders of the DEUG are authorised to sit competitive examinations for civil service posts. In other cases, they can expect to get only subordinate posts.

Figure 26

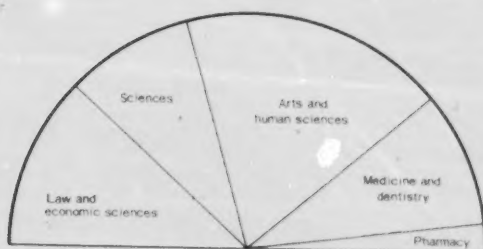
FRANCE

ENROLMENTS IN POST-SECONDARY EDUCATION (1972)

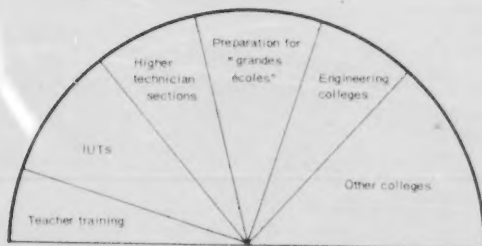
Total



Universities



Other institutions



two years after the Baccalauréat. As we shall revert later to this type of education, we shall merely say that it is given in two types of institution :

- higher technician sections in the lycées;
- University Institutes of Technology (IUTs).

Technical education as a whole accounts for 7 per cent of post secondary enrolments.

2. Another type of short-cycle education is provided in the teacher training colleges which give a two-year course for future primary teachers ("instituteurs"). This accounts for 2 per cent of enrolments.

3. "Colleges" : under this term we include the major State colleges, the "higher" colleges and the "preparatory" classes in the lycées.

The "colleges" comprise very different institutions, some public, some private; some are prestige institutions opening the door to top-level careers, others train only higher technicians. If we place them in order of prestige, we find at the top the major State colleges ("grandes écoles"), which have only a few thousand students (1): their courses generally last three years, but entrance is subject to a competitive examination taken two years after the Baccalauréat. Certain lycées prepare for these examinations and students usually decide to study for an examination giving access to several "grandes écoles", choosing between them according to the place they obtain on the list of results. These preparatory classes account for about 4 per cent of post-secondary enrolments.

After the "grandes écoles" come numerous colleges, referred to here as "higher", because the term "supérieur" often appears in their title, e.g. "Ecole supérieure d'électronique" or "Ecole supérieure de traducteurs et interprètes". (2) Some of them even accept students without the Baccalauréat, whereas admission to others implies one or more years of preparations. (3) Others again recruit at Baccalauréat level

-
- 1) From the standpoint of starting salary, which is a good reflection of the status of a college in the business world, the journal Expansion (June 1973) graded the first ten "grandes écoles" as follows : Polytechnique, H.E.C., Mines, Centrale Paris, Ponts et Chaussées, Télécommunications, Physique Chimie de Paris, Supélec, Centrale Lyon, Essec. These colleges turn out 200-300 students annually. Prestige is, however, not measured only by starting salary, as illustrated by the eminent literary "grandes écoles" (Ecole Normale Supérieure, rue d'Ulm, for example).
 - 2) But the terminology varies greatly - the Ecole Supérieure d'électronique de Malakoff (Supélec) is undoubtedly a "grande école" and Institute which are not designated as "higher" may be classed in the same category as colleges which are.
 - 3) Cf. J. Markiewicz-Lagneau, L'Enseignement supérieur court en France, Paris, La Documentation Française, 1973, pp. 11-12.

and provide a three-year course. There is great diversity in this field; some colleges give a vocational qualification of very average level, others train higher technicians or engineers. They provide short-cycle or long-cycle courses as the case may be, and all intermediate stages are possible.

As regards enrolments, we may estimate that 25,000 students train for the secondary sector (engineering colleges) and 50,000 for the tertiary sector (other colleges). They account for under 10 per cent of post-secondary enrolments.

Growth of post-secondary education : 1959-1972

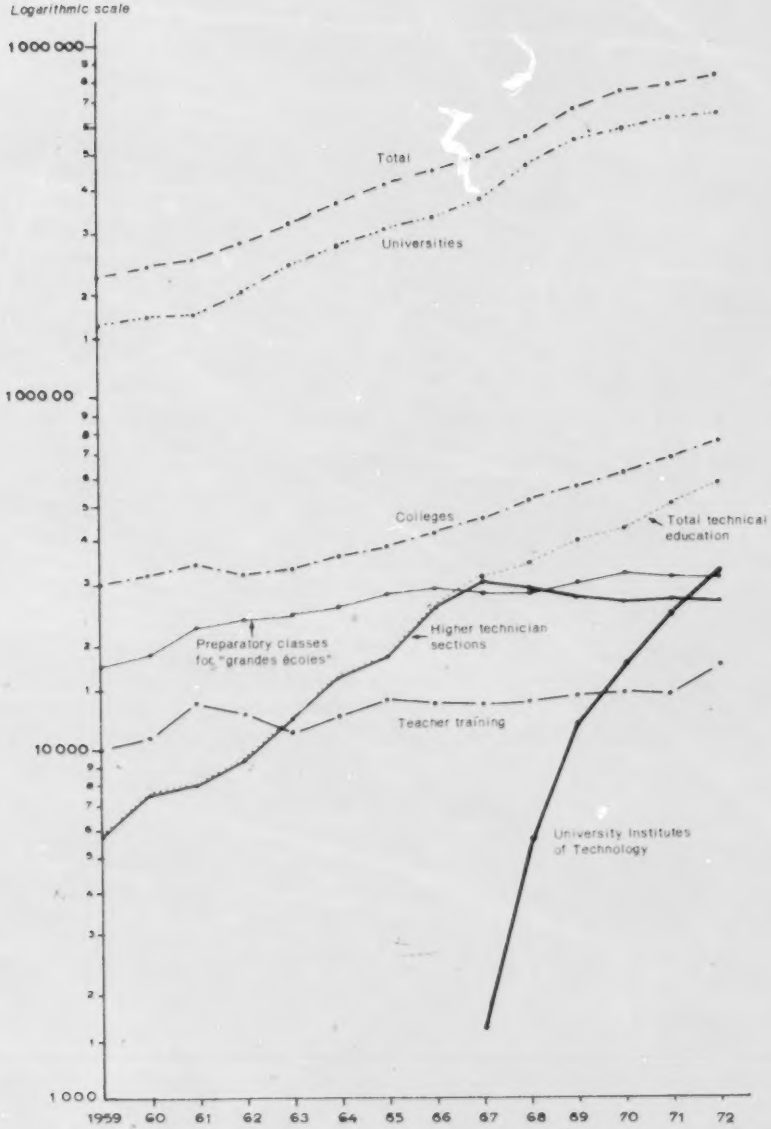
The present situation of French post-secondary education cannot be understood without a brief flashback; while the average annual increase was 10.5 per cent from 1959 to 1972 (Table I annexed and Figure 27 below), the reality differed according to different types of institution. Let us consider these in order, starting with the slowest increase and proceeding to the fastest :

- in teacher training institutions ("écoles normales") enrolment expanded by about 4 per cent per annum; this was because their output was intended for educational sectors (primary and first-cycle secondary) where 100 per cent school attendance had existed in practice for several years. There was therefore no expansion of enrolments (and therefore of teachers) in this sector comparable to that in long-cycle secondary and higher education.
- Enrolments in the preparatory classes for the "grandes écoles" showed a similar increase of under 5 per cent. The "grandes écoles" did not step up their annual intake to any great extent, so that the competitive entrance examination became stiffer and at the same time the status of their graduates rose. The engineering colleges for example continue to give a specifically vocational training, but graduates of the engineering "grandes écoles" very soon obtain senior posts and leave the actual engineering work to graduates of lower-level institutions (ENSI).
- Enrolments in the various colleges rose by about 7 per cent, which is less than the average; as the "grandes écoles" enrolments show no increase (or a very slight one and they represent only one-tenth of enrolments in all colleges in general) we may assume that the number of colleges increased in order to meet the growing need for qualified manpower and according to the process outlined in the preceding paragraph.
- University enrolments over the same period showed an average annual increase of 11.2 per cent. As a result of this slightly

Figure 27

FRANCE

GROWTH OF POST-SECONDARY EDUCATION
(1959-1972)



above-average growth, university enrolments have now risen from 72 per cent of post-secondary enrolments in 1959 to 78 per cent. The increase in absolute terms was highest in this sector, with enrolments rising from 160,000 to 640,000; and the problems of adjusting to such a high demand have also been felt most acutely here.

- The fastest growth in enrolments was in technical education, where the rate of average annual increase was nearly 20 per cent. As may be seen from Figure 27, after 1967, the date when the IUTs were set up, these institutions took over the growth of technical education and the higher technician sections in the lycées remained stationary or declined. We may indeed say there was a relay between the two institutions, for the higher technician sections established in 1952 in the technical lycées led to a "brevet de technicien supérieur" at the end of the second year. The education given in these sections was highly specialised, and as it was located in the lycées it was thought that the lack of student status kept away a number of Baccalauréat holders who preferred to go to the university.

As there was a steadily increasing need for qualified personnel of intermediate level, an effort was made to get over the disadvantages of the higher technician sections by creating the IUTs in 1966-1967 :

- in contrast to the higher technician sections, the IUTs would give student status to all persons attending their courses;
- though designed to train technicians for the secondary and tertiary sectors, the IUTs would give less specialised training than the higher technician sections;
- to facilitate the transition, provision was made for a concertation policy coordinating the setting-up of IUTs and the closing-down of higher technician sections.

In order to increase the number of students choosing short-cycle higher education, an attempt has been made to introduce innovations as compared with the university :

- a third of the teachers have vocational experience of industry, management, computer science, etc.
- the instruction focuses strongly on practical learning, even on manual work : as well as theoretical instruction, provision is made for a lot of practical work and in the second year a period in industry is compulsory.
- attendance at all classes and practical work is compulsory; work is done in small groups and the final examination is replaced by continuous assessment.

- admission to the IUT is granted on consideration of the candidate's dossier; in theory, the Baccalauréat is not essential, but in 1973 only 5 per cent of first-year entrants were admitted without the Baccalauréat and then only after sitting a special entrance examination (and not on certificates).

Have the IUTs fulfilled the hopes placed in them at the time of their creation? After several years of operation, it is possible to provide the elements of a reply to this question. (1)

The first point to stress is that the IUTs have failed to attract a substantial number of students away from long-cycle education. The French Fifth Development Plan forecast that in 1973 the IUTs would contain 21 per cent of the student population. In 1972, however, all technical education combined accounted for only 7 per cent of post-secondary enrolments. As we saw in the paragraph on the growth of post-secondary education, the IUTs merely took over technical education. The rate of expansion of technical education is twice the average rate for all institutions, but this increase corresponds more to the growth of a category of workers on the labour market than to a change in the behaviour of post-secondary students. The development of the IUTs has had no effect on the growth of university enrolments. As seen from Figure 27 (see above), the appearance of the IUTs did not alter the curve of university expansion: while there has been a slight tapering off since 1970, this is due to the slowing-down of the general increase in all post-secondary enrolments.

We may, therefore, say that the IUTs did not noticeably encroach on university enrolments. In the light of initial motivations, this therefore represents a failure.

On a second point - immediate entry into working life after the IUT - the CEREQ study quoted above shows that the current situation does not correspond to the initial objective:

- "for a very large number of students (38.5 per cent) the end of the IUT course does not mean the end of their studies.
- "The figures are much lower for students in the computer science department (26.1 per cent), male students in marketing techniques (15.4 per cent) and female students in applied biology (23.9 per cent).
- "Irrespective of sex, the same proportion (about 17.4 per cent) obtain additional qualifications by continuing their studies while in employment.

1) Cf. the two studies by the Ministry of Education - CEREQ Information note N° 10, Insertion professionnelle des anciens étudiants des IUT, August, 1972.

Forecasting Directorate, IUT/STS Working Group, interim note, January, 1973.

- "However, 22.5 per cent of men and 13.4 per cent of women continue their studies as their principal occupations. (1)

These figures show that although originally designed as vocationally oriented SCIs, the IUTs have, in fact, become for a notable proportion of students a first stage of higher studies. This result need not be regarded as a failure insofar as the IUTs enable certain young people to do higher studies. A detailed study of the sample will give us a better picture of this part of the population.

The last point we may take as a criterion of the success of the IUTs is the reception given to their graduates on the labour market.

At the time of the CEREQ survey, 80 per cent of the male students and 85 per cent of the female students were in employment (or on military service - obviously this applies only to men). 17 per cent of the male students and 10 per cent of the female students were following further studies and only 2 per cent of the men and 3 per cent of the women were seeking employment, being neither in a job, or in the armed forces, or studying. (2) These figures may be regarded as fairly satisfactory, particularly if we note that the average monthly salary is F 1,540 for men and F 1,390 for women - doubtless more than would be paid to a student who had given up his university studies after two years to take a job.

School background

Having obtained the Baccalauréat which marks the end of their secondary studies and which also opens the door to higher studies - since in France the two are combined - more than half of those thus qualified go to the university (cf. Table 8 and Figure 28), 10 per cent go to the preparatory classes for the "grandes écoles", 18 per cent go to short-cycle technical education, and 21 per cent go elsewhere (this heading seems to cover mainly students of various vocational training colleges and those who take a job).

As may be seen from Table 8, the choice of one of the above options is related to the type of Baccalauréat obtained. In order to set out this table, we started with the type providing the highest proportion of entrants into the institution carrying most prestige, i.e. the preparatory classes leading to the "grandes écoles".

This is found to be Type C with mathematics as the main subject; 36 per cent of students obtaining this type of Baccalauréat proceeded next year to the preparatory classes for the "grandes écoles". The other types of Baccalauréat are then arranged in decreasing order

1) CEREQ op. cit., p. 4.

2) Source : CEREQ, op. cit., p. 5.

on the same principle. It is then possible to examine each orientation and determine for each of them the types showing the highest or lowest proportions (i.e. deviating more or less notably from the mean : cf. Figure 29).

FRANCE

Table 8 : OPTIONS CHOSEN IN 1972-1973 BY STUDENTS
OBTAINING THE BACCALAUREAT IN 1972

Main subject in Baccalauréat	Preparatory classes for "Grandes Ecoles"	University (*)	IUTs	Higher technician sections	Other options	Total
Mathematics (série C)	36.4	50.8	8.7	2.7	1.4	100 14.6
Applied Mathematics (série E)	29.8	20.3	27.5	11.3	11.1	100 2.8
Arts (série A)	5.9	68.4	3.0	6.5	12.6	100 32.3
Natural sciences (série D, D')	5.1	63.9	9.4	4.8	16.8	100 21.9
Economic and Social sciences (série B)	4.3	61.4	12.6	6.0	15.7	100 8.4
Technical (série F)	0.3	7.4	27.0	25.4	39.9	100 7.5
Management techniques (série G)	0.2	19.0	11.9	13.4	55.5	100 12.3
Computer science (série H)	0.2	24.8	27.4	5.8	42.0	100 0.3
Total, all types combined	9.6	52.2	9.7	7.9	20.6	100 100 (184 196)

(*) Students in the preparatory classes for the "Grandes Ecoles" enrolled at the university have been deducted.

Source : Ministère de l'Education nationale, Statistiques et Sondages.

Note d'information 73-38, November, 1973.

Preparatory classes for the "Grandes Ecoles"

Only Baccalauréat holders with Type C (mathematics) or E (applied mathematics - a similar and infrequent option) are to be found in large numbers in the preparatory classes. This confirms that Section "C" is the so-called "noble" section of secondary education, where selection is most severe and which contains the best pupils.

Figure 28

FRANCE

OPTIONS CHOSEN IN 1972-1973 BY BACCALAUREAT HOLDERS (1972)
(Distribution by options)



A few years ago, the "noble" and ordinary sections of secondary education were distinguished by the presence or absence of Latin ("classical" as opposed to "modern" sections), but to-day, the criterion is mathematics, and the pupil who can keep his place in the C section has every chance of going to the higher institutions of greatest prestige. If the other non-technical types of Baccalauréat send a small proportion of students to the preparatory classes, this is because there are some literary and scientific "grandes écoles", the latter dominated by the natural sciences. Note that holders of the Technical Baccalauréat practically never go to the "grandes écoles".

Universities

Baccalauréat Type A (Arts) sends the highest proportion of its students to the university, where they usually study Arts (62 per cent) or Law (27 per cent).

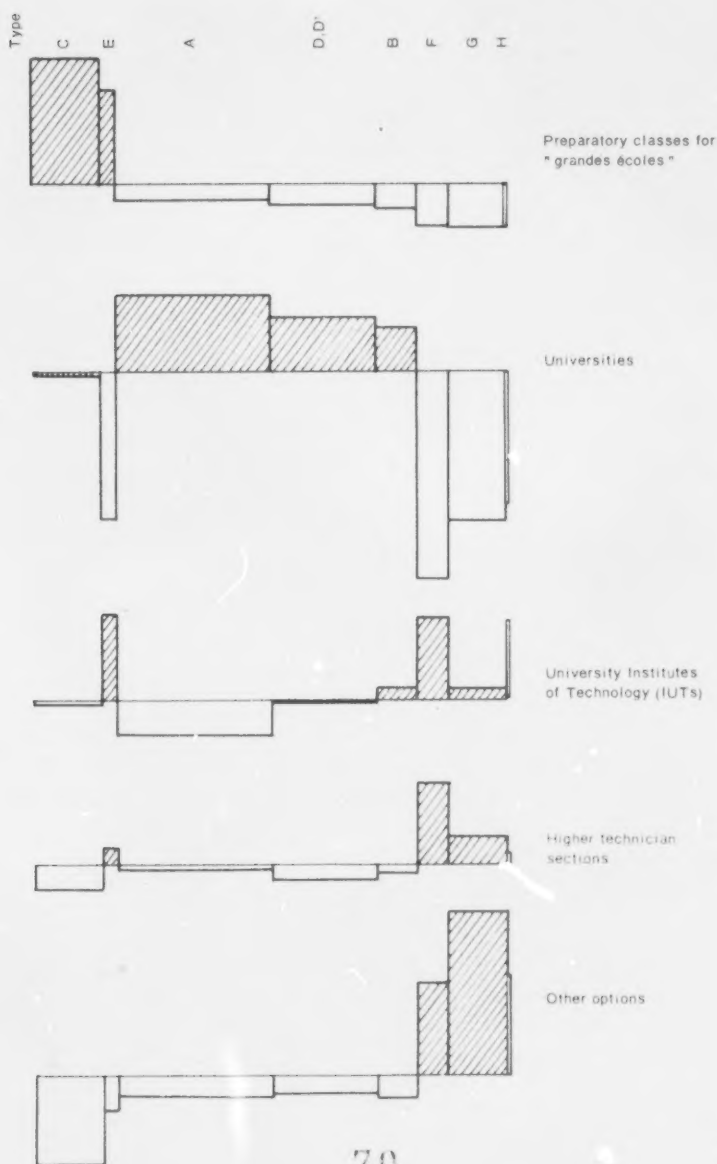
Next come Types D and D' (Natural Sciences); here more than half the students going to the university study Medicine or Pharmacy and nearly a quarter Science.

Type B (Economic and Social Sciences) also provides an above-average number of university undergraduates studying Economics (39 per cent), Law (27 per cent) and Arts (25 per cent).

Figure 29

FRANCE

OPTIONS CHOSEN IN 1972-1973 BY BACCALAUREAT HOLDERS (1972)
(Deviation from the mean percentage)



Slightly below the average is Type C; it should not be forgotten that over half these Baccalauréat holders go to the university, where they study Science (51 per cent) and Medicine (28 per cent).

The Technical Baccalauréat provides few university students.

University Institutes of Technology (IUTs)

It can be seen that this type of establishment has a large proportion of students with a non-technical Baccalauréat : Type E (Applied Mathematics); 27.5 per cent of students of this type go to the IUTs. It seems that this Baccalauréat (still of small numerical importance, but expanding), which is well represented in the IUTs and, paradoxically, in the preparatory classes for the "grandes écoles" as well, attracts students with a good scholastic record, particularly interested in the subjects chosen. As the IUTs in a number of departments offer them the possibility of deepening their knowledge and acquiring a vocational training in a subject of special interest to them, they have no hesitation in going there - the prestige of the institution being no longer the most relevant variable.

Type F (Technical) is, of course, well represented, the link between training received and type of studies followed subsequently being very clear. The same applies to Type H (Computer science), which is taken by only a few students.

Higher technician sections

The situation in the higher technician sections is very similar to that in the IUTs, as there is a close resemblance between these two types of education.

Other options

Lastly, as regards other options, it is remarkable that the order here is almost the reverse of that for the preparatory classes; as this heading corresponds in practice to leaving the school system (short-or long-cycle) to enter employment, possibly after a short vocational training in a lower-level institution, it is quite logical that the elimination rate should be higher among the less noble sectors of secondary education.

Type C (Mathematics) has the lowest elimination rate, and Type G (Management techniques) has the highest, followed by Type F (Technical). The fact that a Type preparing for the tertiary sector leads more frequently to elimination than a Type preparing for the secondary sector can certainly be explained by labour market considerations in the two sectors : as technicians in the secondary sector are in greater demand than the others, Baccalauréat holders in this section

are in no danger of being without employment at the end of their studies - the situation is much more uncertain for those in the tertiary sector.

Social background

As in previous cases, we shall use the father's occupation as an indicator of student's social background. For purposes of comparison, and within the limits of available statistics, we shall consider four populations (cf. Table I annexed) :

- students of a "grande école" : HEC (Hautes Etudes Commerciales), ranking second among the "grandes écoles" according to the starting salary for a young graduate;
- University students;
- IUT students;
- the reference population for the corresponding age group, i.e. all young people aged 17 to 21 years.

Comparison of the proportion of each socio-occupational category in the population considered shows very large contrasts between the populations (cf. Figure 30).

If a distribution corresponding to the reference population is regarded as "democratic", it is clear that the least democratic of the three is the "grande école" : for the HEC, the least numerous groups in the reference population, which are at the top of the social scale, i.e. professional and managerial workers, are the ones most heavily represented (reference population 5 per cent, HEC 51.5 per cent) : the converse holds for industrial workers, who are extremely under-represented at the HEC (HEC 2.5 per cent, reference population 40 per cent).

The other categories are more or less over-represented (in relation to the reference population) insofar as they are located towards the top of the social scale : e.g. middle level executives (reference population 6 per cent, HEC 20 per cent). On the other hand, clerical workers, who are placed just above industrial workers on the social scale, are slightly under-represented (reference population 8 per cent, HEC 5 per cent).

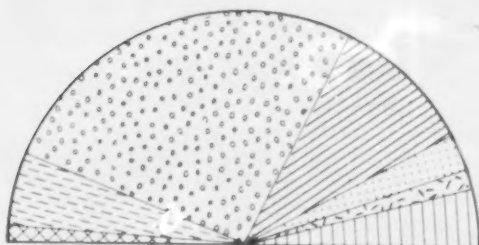
Figure 30 shows that university recruitment is more democratic than the HEC (and the "grandes écoles" in general) and IUT recruitment even more democratic than the university. While professional and managerial workers (the category typical of the top of the social scale) represents 5 per cent of the reference population, it represents 14 per cent in the IUTs, 29.5 per cent in the universities, and 51.5 per cent at HEC. Conversely, for industrial workers (taken as typical of the bottom of the social scale) the proportion falls

Figure 30

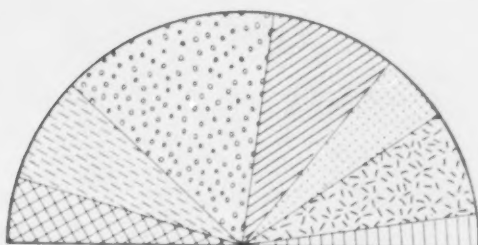
FRANCE

DISTRIBUTION OF STUDENTS BY SOCIAL BACKGROUND
AND BY TYPE OF INSTITUTION

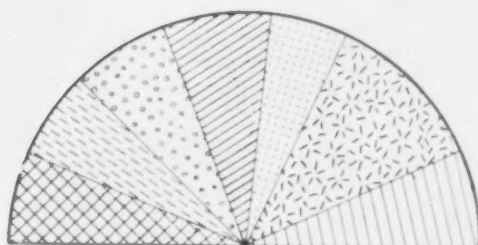
Ecole des
Htes Etudes
Commerciales
(H.E.C.)
1971



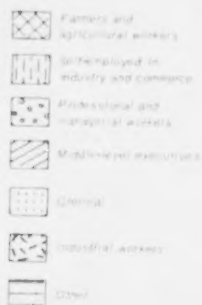
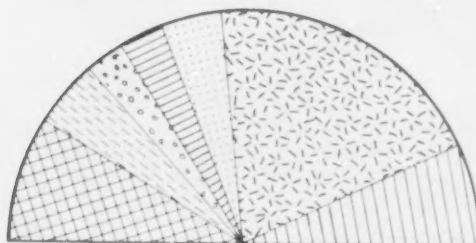
Universities
1971



University
Institutes
of Technology
1972



17-21
Age Group
1971



from 40 per cent of the reference population to 23 per cent in the IUTs, 14.5 per cent in the universities, and 2.5 per cent at HEC - the proportion decreases in the same order as before. The other categories rise steadily if they are located in the upper part of the social scale (middle level executives), or fall steadily if they are in the lower part (agriculture). As regards the middle categories (self-employed in industry and commerce and clerical workers), these are lightly represented in the reference population and at HEC, but more heavily represented at the university and the IUTs. This means that children from these categories have access to higher education and are not under-represented like industrial workers, but that access is limited to the establishments of least prestige, i.e. with the most democratic recruitment.

If the categories are regrouped as upper class (professional and managerial workers), middle class (self-employed in industry and commerce, clerical workers) and lower class (industrial workers, agricultural workers, and miscellaneous) we find that, of ten university or IUT students :

- 5 from the upper class background are at the university, compared with 3 at the IUT;
- 2 from the middle class background are at the university, compared with 2 at the IUT;
- 3 from the lower class background are at the university, compared with 5 at the IUT.

To sum up, we may say that IUT recruitment is more democratic than university recruitment : the categories at the top of the social scale are in the majority at the university, but the reverse is the case at the IUTs.

Age

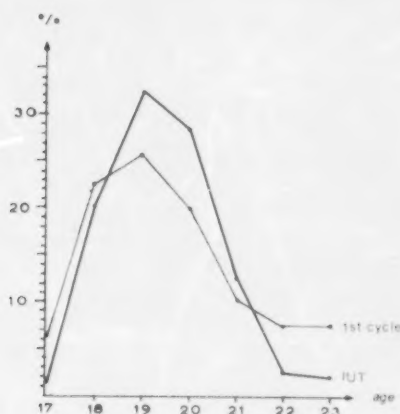
In order to make a comparison which is not distorted by differences in the duration of studies, IUT first-year entrants are compared with university first-year entrants (cf. Table K annexed and Figure 31). In both cases the most frequent age is 19 years, but the median age is higher in the IUTs than in the university first cycle : 55 per cent of first-cycle university students are aged 19 or under, whereas only 44 per cent of IUT students are in this age group. We may therefore say that IUT students are older when they enter higher education than university students : might this be the result of accumulated arrears at school ? Only a detailed analysis of the sample can give the answer.

On the other hand, IUT entrants form a more homogeneous population. Students aged 18, 19, or 20 account for 59 per cent of the students entering universities, but account for 81 per cent of

Figure 31

FRANCE

DISTRIBUTION BY AGE OF STUDENTS ENTERING FIRST YEAR
IUTs AND FIRST CYCLE UNIVERSITY



students entering the IUTs; quite a substantial proportion (15 per cent) enter the university at age 22 or over, whereas the figure is much smaller (5 per cent) at the IUTs.

Differentiation by sex

The distribution by sex varies greatly according to the type of institution or, at the university, according to the discipline chosen. At the two extremes (cf. Table 9), we find on the one hand the ten principal "grandes écoles" from the starting salary standpoint where male students account for 99 per cent, and on the other hand, the departments of Arts and Human Sciences where female students represent 65 per cent of enrolments. It therefore seems that the proportion of male students is higher in institutions of high prestige. This connection is easy to understand when we look at the small number of women in posts of high responsibility in France. This is the third country for which we are forced to make the same observation. Higher education in France, as in Yugoslavia and Britain, merely reflects the position on the labour market in this respect. Taking the institutions in decreasing order for male students, we

find at the top the ten main "grandes écoles" (99 per cent), followed by engineering colleges in general (93.5 per cent) (including 9 of the "grandes écoles" mentioned above). The level of these colleges is not so high and the proportion of female students is correspondingly higher.

FRANCE

Table 9 : DISTRIBUTION OF STUDENTS IN POST-SECONDARY EDUCATION, BY SEX

Institution or university discipline	Sex		Total
	male	female	
Ten main "grandes écoles" according to starting salary	98.8	1.2	100 (5 258)
Engineering colleges (1971)	93.5	6.5	100 (25 039)
Preparatory classes for "grandes écoles" (1973)	74.0	26.0	100 (32 787)
IUTs	71.0	29.0	100 (35 422)
Medicine and Dentistry (1971)	69.1	30.9	100 (68 471)*
Other colleges (1973)	66.8	33.2	100 (50 159)
Law and Economic Sciences (1971)	66.4	33.6	100 (109 477)*
Pure sciences (1971)	66.2	33.8	100 (100 424)*
Higher technician sections (1972)	49.7	50.3	100 (26 480)
Pharmacy (1971)	42.5	57.5	100 (16 281)*
Teacher training (1973)	40.6	59.4	100 (17 975)
Arts and Human Sciences (1971)	35.0	65.0	100 (167 601)*

Sources : Ministère de l'Education Nationale :

- Statistiques des enseignants N° 19, March 1973, Chap. 5, section 2.
- Statistiques et sondages, doc. 3 177, 3 507, 4 212, 4 363, 4 367.
- Forecasting Directorate - interim notes of the working group IUT, STS, January 1973.
- Expansion, June 1973.

* Total corresponding to students whose sex is known.

Third in ranking order are the preparatory classes for the "grandes écoles" which enrol 74 per cent of male students. The lower rate is mostly due to the numbers preparing for non-scientific "grandes écoles". The IUTs (71 per cent male students) come immediately after the "grandes écoles" and the preparatory classes, and before all the university disciplines. The high percentage of male

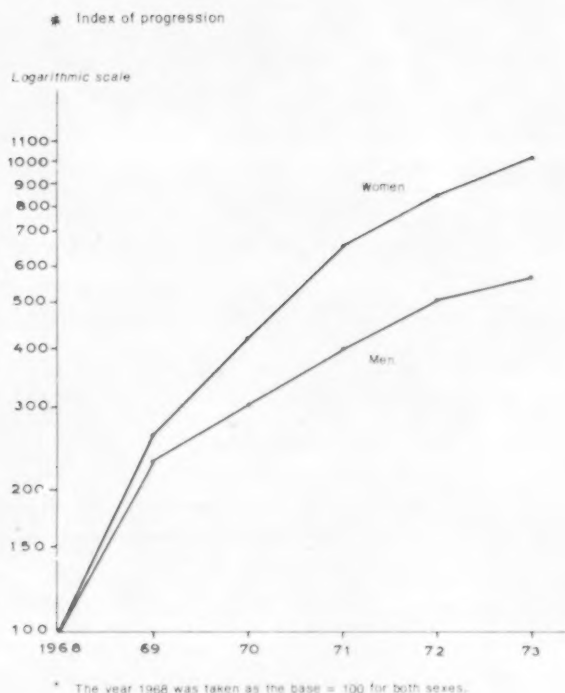
students in the IUTs might seem to indicate that these institutions enjoy fairly high prestige. In fact, however, as shown in Figure 32, the proportion of male students is falling rapidly from year to year :

1968 : 83.6 per cent	1971 : 76.1 per cent
1969 : 80.6 per cent	1972 : 75.2 per cent
1970 : 78.6 per cent	1973 : 71.0 per cent

Figure 32

FRANCE

INCREASE IN ENROLMENTS IN IUTs BY SEX



The percentage increase in female students is substantial (38 per cent from 1972 to 1973), while for male students it is steadily declining (11 per cent for the same period). One might think that this corresponds to the period of starting-up the institution and that in a few years this situation will be the same as in the higher technician sections where the percentage of female students is about 50 per cent. But it is also due, as we shall see later, to the creation of departments which tend to attract women.

At the level of 65-70 per cent of male students, we find the following :

- medicine and dentistry (69 per cent)
- colleges other than engineering (67 per cent)
- law and economic sciences (66 per cent)
- science (66 per cent)

These are disciplines or institutions of fairly high level; some have an entrance examination (medicine and colleges), others require good mathematics (economic sciences or pure sciences).

Below 65 per cent, there is a threshold, since we go down to 50 per cent to find the higher technician sections, which provide technical education having less prestige than general education.

Pharmacy contains only 42.5 per cent of men students. This is a special branch of education covering only a small proportion of university enrolments.

The teacher training colleges for primary teachers have a fairly high number of female students (only 41 per cent men). As we saw for other countries, the teaching profession contains a large proportion of women (and thus loses its prestige).

In the last place, we find arts and human sciences with only 35 per cent male students. This branch, which attracts the highest number of female students, leads mainly to teaching. 86 per cent of arts graduates (1967) went into teaching. (1) As noted, this is the branch with the lowest prestige, which according to public opinion, trains future unemployed.

Differentiation by sex is not only operative by type of institution; it can also be seen very strongly within the same institution like the IUT which has departments consisting almost entirely of male students and others with a very high proportion of female students.

Table 10 below groups the various specialities, firstly by sector of activity to which they lead (secondary, tertiary), and then within the same sector, by decreasing percentage of male students.

1) Philippe Vrain, *op. cit.*

FRANCE

Table 10 : INSTITUTS UNIVERSITAIRES DE TECHNOLOGIE
(Distribution of students by sex and by department)

	Department	Sex		TOTAL	
		Male	Female		
SECONDARY SECTOR	Engineering, mechanical, electrical, civil, chemical, thermal	97.3	2.7	100	(34.3)
	Health and safety	80.5	19.5	100	(0.2)
	Physical measurements ...	78.1	21.9	100	(4.7)
	Chemistry	61.8	38.2	100	(5.3)
	Applied biology	35.8	64.2	100	(4.9)
TERTIARY SECTOR	Marketing techniques	63.7	36.9	100	(12.5)
	Statistics and quantitative techniques	62.1	37.9	100	(0.8)
	Computer science	60.9	39.1	100	(8.8)
	Public administration and business management..	58.4	41.6	100	(21.8)
	Social and legal careers	40.6	59.4	100	(2.7)
	Information careers	26.0	74.0	100	(3.9)
	Total, all departments combined	71.0	29.0	100	(100)
				35 422	

Source : Ministère de l'Education Nationale. Statistiques et sondages. Information note 73-35, October, 1973.

In the secondary sector, the various types of engineering (mechanical, electrical, civil, chemical, thermal) form a homogeneous group considerably above the average for all departments combined (71 per cent) and contain almost only male students (97 per cent) (cf. Figure 33). This is an important group as it constitutes over one-third of IUT enrolments. This high proportion of male students corresponds fairly well to the reality of working life since in 1968 (1) out of 100 technicians working in building, public works or manufacturing industries, 94 were men.

In the secondary sector, three other specialisations less directly connected with production have a fairly high proportion of male students - health and safety (80.5 per cent), physical measurements (78 per cent) and chemistry (62 per cent). On the other

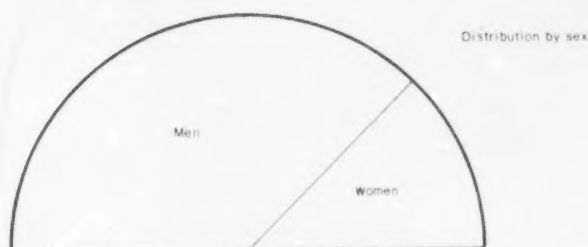
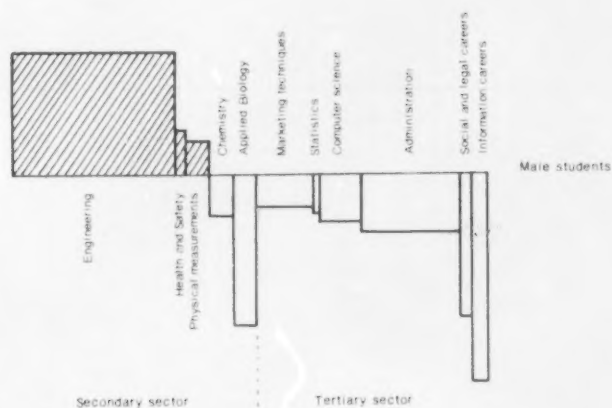
1) Source : INSEE, Population active, Table 8.

Figure 33

FRANCE

INSTITUTS UNIVERSITAIRES DE TECHNOLOGIE, 1973
(Distribution of Students by sex and by department)

Deviation from the mean percentage



hand, the department of applied biology contains only one-third of male students. One reason for the majority of female students in this department is because it leads to the occupation of laboratory assistant, which is very popular with women.

Four specialisations in the secondary sector have about 60 per cent male students, their common feature being that they all lead to occupations in management or administration. These are :

- marketing techniques (64 per cent)
- statistics and quantity techniques (62 per cent)
- computer science (61 per cent)
- public administration and business management (58 per cent)

Next come two categories where female students are in the majority : "social and legal careers" (41 per cent) which leads to the largely female occupation of social worker, and lastly "information careers" (26 per cent), a new branch where outlets are still not clearly defined and career prospects rather insecure.

Within the IUTs differentiation by sex is itself affected by social background. Variations are slight, the proportion of men ranging from 69 to 78 per cent according to the father's socio-occupational category, but they seem to have some significance (cf. Table L annexed and Figure 34).

The social groups providing fewest male students (69 per cent) are farmers (average all categories : 75 per cent) and the professional and managerial workers (71 per cent).

Social groups showing percentages of male students around the mean correspond to the middle classes (1) :

- self-employed in industry and commerce : 74 per cent;
- middle level executives : 76 per cent;
- clerical workers : 75.5 per cent.

The group sending most male students is that of industrial workers (78 per cent).

Two hypotheses may be formulated in relation to the previous observations :

- the best that the lower class can do for its young men is to send them to the IUTs; young women in this class do not go on to higher education. On the other hand, the upper class, which can have access to institutions of higher prestige than the IUTs, does not send its young men (who are destined for the "grandes écoles" or the best university departments), but its young women for whom they have lower ambitions.

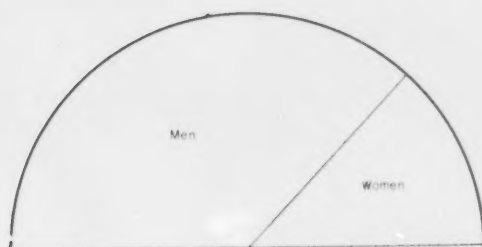
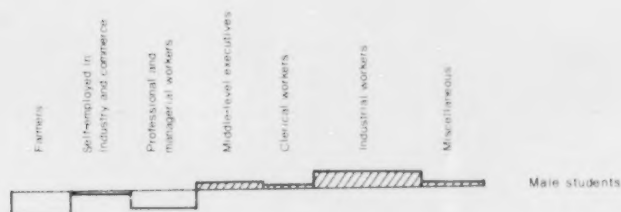
1) or to social groups consisting of a mixture of various populations like the last category in the Table (76 per cent).

Figure 34

FRANCE

INSTITUTS UNIVERSITAIRES DE TECHNOLOGIE, 1971
(Distribution of students by sex and by social background)

Deviation from the mean percentage



- A second hypothesis might be that the lower class is more strongly tempted to send its children to a branch of education leading to jobs in the secondary sector because industrial workers are themselves employed in this sector and are familiar with it. The upper class is more tempted to send its children into the tertiary sector, which is likewise the sector of its own activity.

These two hypotheses are not incompatible and their effects may be cumulative. We shall revert to this question more fully when considering the IUT sample in subsequent chapters; at that stage, we shall have an opportunity to check the different variables and see how they affect these first general hypotheses.

Chapter II

CHARACTERISTICS OF STUDENTS IN SHORT-CYCLE HIGHER EDUCATION

I. THE SAMPLE

One of the main hypotheses on which the selection of the samples in the three countries was based was that the characteristics of the student population, its expectations and plans for the future varied to quite a large extent according to external factors such as the type of short-cycle higher institution (SCI), the subject taught or the location, i.e. the educational environment. The educational environment must be added, of course, to the differences arising out of the socio-economic and cultural milieu of the student himself.

Thus the following three criteria were used as a basis to select the samples :

1. the type of short-cycle higher education institution according to the main sectors of the economy (secondary sector or tertiary sector);
2. the specialisation chosen;
3. the existence, or lack, of a university environment, i.e. whether or not the SCI is in a university town where students had other opportunities for higher education. (1)

Although the research project was prepared jointly by the three national teams, there are variations in the samples from one country to another which need to be briefly explained.

1. France

The French sample is representative of the whole of France. Eight IUTs were selected, 5 of them in towns with other forms of higher education, in particular universities (2), and 3 of them in "non-university" towns. (3) In these 8 IUTs, departments belonging

- 1) Only in the case of the French and Yugoslav samples.
- 2) Bordeaux, Grenoble, Lille, Paris.
- 3) Belfort, Le Havre, Montluçon.

to the secondary and tertiary sectors were chosen according to the breakdown illustrated in Table 11 below.

FRANCE

Table 11 : DISTRIBUTION OF STUDENTS BY TOWN, SECTOR AND DEPARTMENT
(Sample)

Town		Secondary sector	Tertiary sector	Computer science	Enrolments (total) N %	
BELFORT	NON-UNIVERSITY	Electrical engineering Mechanical engineering		Computer science	285	15.6
LE HAVRE		Electrical engineering	PABM (*) Marketing		189	10.4
MONTLUÇON		Electrical engineering Mechanical engineering			137	7.5
BORDEAUX		Electrical engineering Physical measurements	Information careers		258	14.1
GRENOBLE	UNIVERSITY	Electrical engineering Physical measurements	Marketing, social careers PABM	Computer science	330	18.1
LILLE			PABM	Computer science	95	5.2
PARIS (CACHAN)		Electrical engineering			167	9.2
PARIS (VERSAILLES)			Social careers Information careers PABM	Computer science	363	19.9
TOTAL		893	672	259	1 824	100.0

(*) Public Administration and Business Management.

893 students were questioned in the secondary sector and 931 in the tertiary sector.

If the figures do not correspond exactly to the sector breakdown of the overall student population of the IUTs (1), it is

- 1) Of 24,380 students enrolled at the beginning of the 1970-1971 academic year, 11,636 were in the tertiary sector (2,216 in computer science), i.e. 44 per cent of the total, whereas 12,744 were in the secondary sector, i.e. 56 per cent of the total. (Source : Ministry of Education, Statistics and Surveys).

because the "computer science" department was deliberately over-represented since it had appeared in the course of the preliminary survey to have features of its own which were particularly interesting for research.

Finally, it seemed important to take the year of study into account; it appeared reasonable to suppose that motivations, expectations and future projects would vary according to whether the student was at the beginning of his studies, or near the end of them. The sample is therefore also divided on the basis of this fourth criterion. The sample comprises 1,095 first year students, and 729 second year students - i.e. 60 per cent and 40 per cent of total enrolments. (1)

If sex is used as a variable for assessing the representativeness of the sample, it emerges that the proportions were almost identical in 1971 - the year of the survey; the proportion of male students amounted, in fact, to 76 per cent of the reference population, and to 77 per cent of the sample.

2. Yugoslavia

As far as Yugoslavia is concerned, the sample of Viša Škola students is only representative of the Republic of Croatia, which accounts for one-quarter of all students, both from higher education in general, and from the Viša Škola, in particular.

Eight Viša Škola were selected, of which six are in towns where other forms of higher education are available (2) and two are in "non-university" towns. (3) Departments belonging to the tertiary and secondary sectors were chosen in these eight Viša Škola on the basis of the breakdown indicated in Table 12 below.

476 students were questioned in the secondary sector and 934 in the tertiary sector. The proportions, which were 34 per cent for the secondary sector and 66 per cent for the tertiary sector, represent the situation in all Viša Škola in Croatia within 1 per cent.

However, as far as the proportion of full-time and part-time students is concerned, the latter are under-represented in the sample simply because they were more difficult to contact; in the sample, they form only 31 per cent, whereas, in fact, they account for 56 per cent of all first year students. (4)

1) Of 24,380 students enrolled at the beginning of the 1970-1971 academic year, 15,716 were in first year, and 6,664 in second year, i.e. 64 per cent and 36 per cent of the total. (Source: Ministry of Education, Statistics and Surveys).

2) Zagreb, Split, Rijeka.

3) Vinkovci, Slavonski-Brod.

4) This proportion falls to 44 per cent in second year.

YUGOSLAVIA

Table 12 : DISTRIBUTION OF STUDENTS BY TOWN, SECTOR AND DEPARTMENT
(Sample)

Town		Secondary sector departments(*)	Tertiary sector departments	Enrolments (total)	
				N	%
ZAGREB	university towns	Building and public works		219	15.5
ZAGREB		Technicians		103	7.3
ZAGREB			Statistics	67	4.8
ZAGREB			Post and Telecommuni- cations	77	5.5
SPLIT	non- univer- sity towns		Economics	394	27.9
RIJEKA			Education	224	15.9
VINKOVCI		Agriculture		154	10.9
SLAVONSKI BROD			Education	172	12.2
Total		476	934	1 410	100

(*) and agriculture.

Male students are slightly under-represented in the sample, where they form 49 per cent, compared with 58 per cent in all Visa Skola.

3. Great Britain

The British sample is representative of London polytechnics only and (1), and interviews took place in only three of the five London polytechnics.

Polytechnic I is located in the financial centre of London and comprises a commercial college, a college of technology, a college of arts and a school of navigation.

Polytechnic II is an "old" polytechnic to which have been added schools of building, commerce, law, languages and civil engineering. It is located near the centre of London.

Polytechnic III consists of two separate establishments situated in different places on the outskirts of London : an old polytechnic and a college of architecture.

Table 13 below shows the distribution of students by polytechnic and department of study.

1) Out of 30 in all (England and Wales).

GREAT BRITAIN

Table 13 : DISTRIBUTION OF STUDENTS BY POLYTECHNIC,
BY SECTOR AND BY DEPARTMENT
(Sample)

Polytechnic	Secondary sector departments	Tertiary sector departments	Numbers (total)	
			N	%
I	Technology Sciences	Administra- tion, busi- ness and social studies Art and languages	483	49.0
II	Technology Sciences	Administra- tion, busi- ness and social studies Art and languages	274	27.8
III	Technology Sciences	Administra- tion, busi- ness and social studies	228	23.1
Total	365	620	985	100

As only London polytechnics are taken into consideration, the sample is distorted - in particular, technology students are under-represented; they form 23 per cent of the sample, compared with 34 per cent in all polytechnics. Since the vast majority of students in this branch are male, this means that they are under-represented (76 per cent of male students in the sample, as against 85 per cent in all polytechnics). In interpreting the sample, therefore, particularly with regard to relationships between sex, social background and department chosen, it is important to remember that the female sex is over-represented if the bias built into the choice of sample is to be corrected.

There are two features peculiar to the English sample which must also be noted :

- the students questioned are all in their first year of study;
- part-time students were not questioned.

As far the first point is concerned, it should be mentioned that the usual duration of polytechnic courses is two or three years, according to the type of qualification desired, but can, in some cases, be as much as six years. The first year students questioned are therefore at the beginning of courses of varying duration. However, the consequent distortions are not too serious owing to the

fact that the first two years group the majority of polytechnic students; for example, 79 per cent of the students in the three polytechnics studied in 1971 were in first or second year.

Since part-time students were not questioned, we cannot study this sub-group; in any case, comparisons would only have been possible with the Yugoslav sample, since this category of student does not exist in French IUTs.

II. CHARACTERISTICS OF STUDENTS IN SHORT-CYCLE HIGHER EDUCATION

The aim of this part is twofold: the first objective is to gain a better understanding of students in short-cycle higher education and determine the differences between the three countries with regard to a number of characteristics such as age, sex or social background. The study of these characteristics will allow a distinction to be made between a number of homogeneous sub-groups in terms of age, social background, sex, etc., and these sub-groups will then be used to study students' motivations and plans. It is postulated that individuals with similar characteristics behave and think in much the same way.

Sex

We shall not need to study this characteristic in the samples since we were able to examine the complete statistics for each country. We shall merely report the following very clear finding which is valid for each of the three countries considered: male students opt mostly for the secondary sector where some departments (mechanical and electrical engineering, for example) enrol over 80 per cent of male students, whatever the country. Female students, on the other hand, tend to choose the tertiary sector, in particular social or para-medical careers.

In only one way do the three countries differ in this respect, namely as far as the overall proportion of male and female students is concerned. Great Britain and France are fairly close, with 71 per cent of male students in France and 65 per cent in Great Britain; however, the situation is somewhat different in Yugoslavia where male students account for only 58 per cent of the total student body. These disparities can be fairly easily explained, bearing in mind what was said concerning the various departments. The technical departments (mechanical, electrical engineering), in which male students account for more than 80 per cent of all students, enrol a larger number of students in France and Great Britain than in Yugoslavia. In France and Great Britain (cf. Tables D, G and 9), technical courses are followed by 34 per cent of all students in IUTs and

polytechnics, whereas in Yugoslavia these same departments account for only 21 per cent of all students in the VISA Skola.

Another factor which makes for a larger proportion of female students in the VISA Skola is that they have teacher training departments, whereas this type of short-cycle training is provided by separate Colleges of Education in Great Britain and "Ecoles Normales" in France. If the statistics for this department are excluded, the proportion of male students in Yugoslavia increases from 58 per cent to 65 per cent, making the situation more comparable with that in France or Great Britain.

However, it should be realised that diversity of departments is by no means an explanation, but ought rather to be looked upon as a consequence inasmuch as demand for education has a real influence on the creation of this or that type of department. But this explanation is only valid when entrance is not selective.

In establishments practising selection, only the best are chosen and this, in turn, causes an increase in the prestige of the establishment and, correspondingly, in the proportion of male students. (1) If there is no system of selection, on the other hand, all applications must be accepted. Then again, an increase in applications for this or that area of study results in the creation of the corresponding departments. This second process can lead to a fall in the prestige of the institution, and this, in turn, often results in a higher proportion of women. A good example of this is provided by arts faculties in France.

This analysis seems to fit the situation in the three countries; the highest proportion of male students is found in Great Britain (85 per cent) where, as has been said, admission is selective, and where Colleges of Further Education are expected to have easier access requirements.

Second place is occupied by France, where the proportion of male students is 71 per cent. In IUTs, there is some degree of selection, while universities and various types of post-secondary institutions are able to cope with surplus applications. (2)

Last comes Yugoslavia where, even when teacher training departments are excluded for the purpose of international comparison, the proportion of male students only amounts to 65 per cent. Since there are no other establishments which can satisfy surplus demand, there is virtually no selection.

- 1) This phenomenon was first remarked on in Chapter I.
- 2) It would be valuable to find out whether the increasing proportion of women in IUTs is not due to less severe entrance requirements. Since the Government has undertaken a major IUT construction programme, which, in fact, exceeded demand, the aim is probably to fill the number of places created by lowering requirements.

A possible consequence of this situation, which will have to be checked at a later stage, is that assessments of the prestige of the various establishments may differ. According to this hypothesis, polytechnics should have more prestige in Great Britain than IUTs in France which should, in turn, be more highly rated than the Visa Skola in Yugoslavia. It must be remembered, however, that the only source of information about these various SCIs is the opinion of those who attend them, and their assessments may not be entirely impartial.

Age

A comparative study of age distribution in the samples provided by the three countries poses a number of problems owing to the fact that the age groups chosen for the three samples do not coincide. (1)

As can be seen from Figure 35, which is derived from the figures in Table M in Annex, the most wide-ranging distribution is to be found in Yugoslavia where the proportion of 18 year-olds and under is low - only 1 per cent, compared with 13 per cent in France and 10.5 per cent in Great Britain. (2)

At the other end of the curve, the "over 25" group accounts for 23 per cent of the total number of students in Yugoslavia, compared with less than 1 per cent in France and 7 per cent in Great Britain.

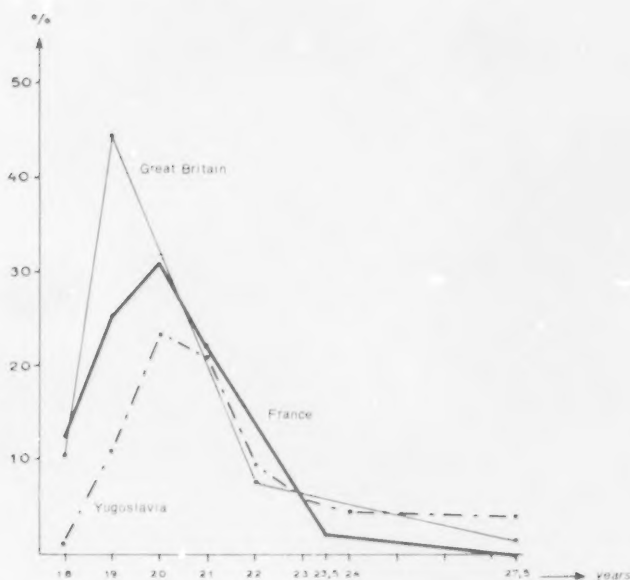
In any event, the average age of students is highest in Yugoslavia (22 years 7 months compared with 20 years in France). (3)

- 1) In Great Britain, for example, there is a category which accounts for 38.5 per cent of students and is made up of all those between 20 and 24 years of age.
- 2) The number of students in the pluri-annual group was divided by the corresponding number of years, and the age limit for the "over 25" group was fixed by agreement at 30 years.
- 3) Only France and Yugoslavia are directly comparable since their samples include first and second year students, whereas the British sample comprises only first year students. In the first two countries, the first point to stress is that the average age is much higher in Yugoslavia; this is because of the number of part-time courses provided for older students who are already working, a situation that does not exist in France. Let it be said straight away that though this situation may occur in Great Britain, we have no record of it since only full-time students were questioned in the polytechnics.

In order to carry out an exact comparison between the three countries, therefore, only 1st year students must be taken into consideration since they are the only ones to whom information is available from all three types of establishment, and this variable obviously has a direct influence on age. Table 14 above shows the age distribution in Yugoslavia and France broken down according to year of study, while Table M gives the distribution of first year students in Great Britain.

Figure 35

FRANCE, GREAT BRITAIN, YUGOSLAVIA
DISTRIBUTION OF STUDENTS BY AGE



Turning now to first year students in Yugoslavia, it is important to remember that this group, in fact, comprises two categories which differ considerably in terms of age : full-time and part-time students. The latter are much older, as can be seen from Table 15 below which divides Yugoslav students according to age, year of study and type of attendance, i.e. full-time or part-time.

Given this distinction, it can be seen that 53 per cent of part-time students in first year are over 25, and 75 per cent in second year. Full-time students, on the other hand, are much younger (the usual age being 20 in first year and 21 in second year).

If only full-time first-year students are taken into consideration, a useful comparison can be made between the three countries; while there is an obvious resemblance (cf. Figure 36 below) between France and Great Britain (the most usual age being 19), the most common age in Yugoslavia is 20.

FRANCE - YUGOSLAVIA

Table 14 : DISTRIBUTION OF STUDENTS BY AGE AND BY YEAR OF STUDY

Yugoslavia			France		
Age	First year	Second year	Age	First year	Second year
18 or under	2.2	0.2	18 or under	19.6	2.1
19	19.3	0.2	19	33.0	14.4
20	29.0	16.0	20	29.0	33.0
21	15.1	28.5	21	13.1	35.5
22-24	16.2	24.5	22 and over	5.2	14.9
25 and over	18.1	30.5	Total	100 = 1 095	100 = 729
Total	100 = 807	100 = 603			

YUGOSLAVIA

Table 15 : DISTRIBUTION OF STUDENTS BY AGE, BY YEAR OF STUDY
AND BY TYPE OF ATTENDANCE

Age	First year		Second year	
	Full-time	Part-time	Full-time	Part-time
18 or under	2.9	0.5	0.0	0.5
19	24.8	4.2	0.3	0.0
20	37.0	7.0	23.8	2.3
21	16.6	11.2	41.4	5.5
22-24	13.3	24.2	28.8	17.0
25 or over	5.4	53.0	5.7	74.7
Total	100 = 592	100 = 215	100 = 386	100 = 217

However, it must be realised that the differentiation of the population according to age does not have the same significance in the three countries considered. In France, age is directly related to success at school, and it is known that if a number of years have to be repeated, this usually has a detrimental effect on the student's

later education. (1) In Great Britain, on the other hand, the possibility of staying one or two more years in secondary school often means that additional "A levels" can be obtained which increases the chances of gaining admission to the higher education institutions of greatest prestige. (2)

- 1) For example, a pupil who starts school at the compulsory age of six and never has to repeat a year will be seventeen in his last year of secondary education ("terminal" class). In 1972, however, seventeen was the most usual age only in the stream C of the baccalauréat which, as has already been seen, is the most selective and offers the most varied career opportunities. In all other sections, the most common age is eighteen. (Sources: Ministry of Education Tables, 1973 edition, p. 170).
- 2) Further on we shall attempt to define homogeneous sub-groups on the basis of several criteria, including age. As it is impossible to keep annual or even pluri-annual groups as they are at present since their numbers might be inadequate, and therefore of no significance, the only possible division is between "younger" and "older".

Classification is as follows: all those who come in the first half of the sample in terms of age will be considered young, while the remainder will be considered old.

This system is easy to apply in Great Britain and Yugoslavia; the under 20 group accounts for 55 per cent of the British sample which is close to the desired proportion of 50 per cent, while 57 per cent of the Yugoslav students are aged under 21, and can therefore be considered young (in Yugoslavia, the division between young and old coincides only very approximately with the distinction between full-time and part-time). It is normal that the division should not be at the same level in the two cases since the populations are different. On the other hand, it may be assumed that there will in both cases be a difference between the behaviour and opinions of the younger students and those of the older ones.

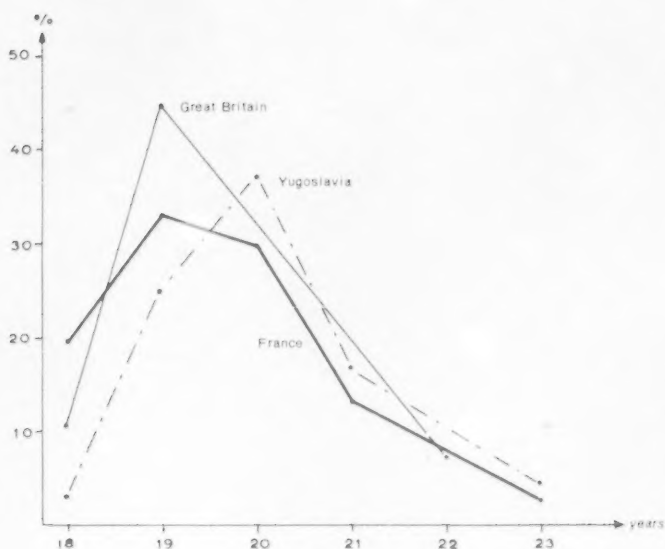
A problem arises in the case of France. If the division between young and old is situated between the ages of 19 and 20, the young only account for 38 per cent of the total number; if, on the other hand, the line is drawn between the ages of 20 and 21, the young make up 69 per cent of the total, which is also too far removed from the proportion of 50 per cent. The difficulty arises from the fact that the 20-year-olds are the most numerous - making up 23.5 per cent of the total. The solution proposed is to refer to the year of study: the most common ages are 19 and 20 in first year (cf. Table 14), and 20 and 21 in second year. One may be considered "younger" if one is 20 in second year rather than in first year.

On the basis of this criterion, the 20 year-old group is cut in two; the young now account for 51 per cent of the total which is satisfactory with regard to the target set.

Figure 36

FRANCE, GREAT BRITAIN, YUGOSLAVIA

DISTRIBUTION OF FULL-TIME FIRST YEAR STUDENTS BY AGE



Social background

As in the first chapter, and for the same reasons, the indicator of social background used is the socio-occupational category of the father of the person questioned. In view of the fact that these categories vary a great deal from one country to another, (1) the only way to make a comparison is to divide the social strata into a number of large groups.

If the intention is to compare an "upper" class with a class located in the lower section of the social hierarchy, we can use a relatively crude indicator contrasting manual workers with non-manual-workers. (2) Such a division is materially possible for the

1) Six categories were chosen for the British survey, ten for the French and nine for the Yugoslav.

2) In the case of France, however, it did not seem realistic to put small shopkeepers in the upper class, so they were included in the other.

three surveys, and will be used subsequently in establishing homogeneous sub-categories. (1)

- In Great Britain, the upper (non-manual) class accounts for 72 per cent of the sample, while, using the same criteria, this group represents only 36 per cent of the total labour force. (2)

- In France, the upper class is smaller, both in the sample and in the labour force as a whole. It accounts for only 53 per cent of the sample and 31 per cent of the labour force. (3)

- Lastly, the situation in Yugoslavia is similar to that in France, the upper class accounting for only 36 per cent of the sample and between 20 and 25 per cent of the labour force. (4)

The fact that non-manual workers are more numerous in France than in Yugoslavia, and more numerous in Great Britain than in France, is easily explained by the presence or absence of farmers as a social category. (5)

On the other hand, it is extremely interesting to observe that the proportion of the upper class in SCHE is higher in France than in Yugoslavia, and the difference is not proportional to its share of the labour force in these countries. Although the order is the same (Yugoslavia - France - Great Britain), the upper class is much better represented in Great Britain than in France, and likewise better in France than in Yugoslavia. By way of comparison, and without attaching too much importance to the figures in view of the differences in classification, if one were to assign an index of 100 to a country where the upper class is equally represented in both the labour force and in SCIs; Yugoslavia would be at 158, France at 170 and Great Britain at 200, which means that the proportion of the upper class in polytechnics would be double its percentage of the labour force.

This fact, as well as the distribution according to age and sex, suggests that the over-representation of the upper class in polytechnics (and to a lesser extent in IUTs) is another indication of the difference in prestige between the various types of SCIs. Once again, the hierarchy is the same: the polytechnics, followed by the IUTs and, then, the Viša Škola.

1) As in the case of the sub-group according to age.

2) Source: Census of Population, 1966.

3) Source: 1968 Census, Working population, p. 74.

4) Estimate based on the branches of activity in the Small Statistical Handbook of Yugoslavia, Belgrade, 1964.

5) This category is so small in Great Britain that it has disappeared from the main headings of statistical classification; however, it accounted for 12 per cent of the French labour force in 1968. Finally, in 1964, Yugoslavia was still very largely an agricultural country, and only in the process of industrialisation.

Distribution of students according to social background, sex and area of study chosen

1. Yugoslavia (cf. Table N in Annex)

In describing the distribution of students according to the various factors, it is necessary, in the case of Yugoslavia, to take two forms of study into consideration, i.e. full-time and part-time. This is important because it is obvious that part-time students are in general older than full-time students (cf. Table 15), and their behaviour will consequently be somewhat different.

To make comparison possible from the purely technical point of view, fathers' occupations were divided into manual ("lower class") and non-manual ("upper class").

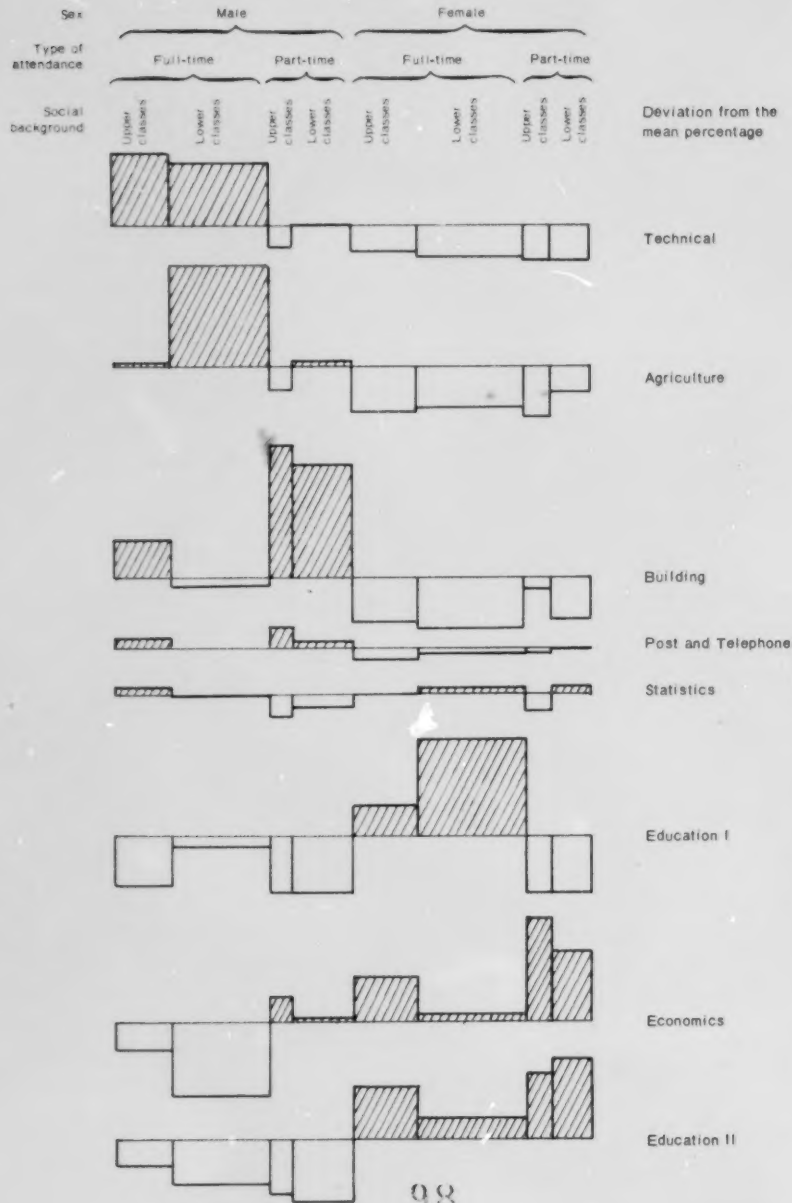
In order to underline the choices made by each group, Table N and Figure 37 were arranged in such a way that the highest percentages appear in a roughly diagonal line across both the Table and the Figure. In this way, it was possible, for each department, to show which group chose this area of study most frequently. Thus :

- the department of technical education is chosen especially by full-time male students, and more by those of upper than of lower class background;
- in agriculture, full-time male students are in the majority and most of them come from lower class and particularly farming families;
- while the two previous departments are chosen mainly by full-time male students, the department of building and public works also attracts male students, but they tend to be part-time, whatever their social background;
- the pattern is similar in the school of Post and Telecommunications, although the differences are less marked; part-time is more common than full-time and there are more male than female students;
- in statistics, the number of female students is on the increase; as in the previous department, there are few differences according to social background;
- the department of education I (Slavonski Brod) attracts mainly full-time female students from lower class families;
- the social feature of the economics department is that it is consistently more popular with students from the upper classes (all things being equal, i.e. sex and whether full-time or part-time). Female students are more numerous than male, and there are more part-time than full-time students, irrespective of sex;
- the last department, education II (Rijeka), is similar in pattern to the preceding one, but the bulk of the students are female.

Figure 37

YUGOSLAVIA

DISTRIBUTION OF STUDENTS BY DEPARTMENT, TYPE OF
ATTENDANCE AND SOCIAL BACKGROUND



To sum up, it is noticeable that, as in other countries, the departments leading to the secondary sector (and to agriculture) are mainly chosen by male students, while female students are mostly attracted towards the tertiary sector. It is also apparent that the distinction between full-time and part-time reveals the part-time students' predilection for building and economics. These choices are indicative of the opportunities that exist for social advancement in Yugoslavia via building and public works in the secondary sector, and production planning (economics) in the tertiary sector.

2. France

Electrical and mechanical engineering are studied almost exclusively by male students (95 per cent in the first case and 99 per cent in the second). Although they make up only 36 per cent of the population, the sons of clerical workers, farmers and industrial workers account for 52.5 per cent of the department of electrical engineering and 52 per cent of the department of mechanical engineering.

In "physical measurements", each group is represented approximately according to its numerical size, with a slight advantage for the sons of professional and managerial workers (17 per cent, whereas they make up only 9 per cent of the population).

The same phenomenon occurs in "public administration and business management", in which the sons of senior managerial workers are over-represented, 25 per cent of them being in this department; this is the highest percentage in the whole of the tertiary sector.

The department leading to careers in the social field mainly attracts the daughters of managerial workers of middle level executives (33 and 25 per cent, respectively). It is also the department with the highest proportion of female students (87 per cent).

The proportion of female students in the computer science department is a little above the average (34 per cent as against 23 per cent on average). As far as female students are concerned, the social categories are all fairly equally represented; in the case of male students, the only category to be slightly over-represented is that of industrial workers' sons (17 per cent compared with only 14 per cent of the population in question).

Careers in information are primarily chosen by female students (55 per cent), but among the male students in the department, sons of senior executives are over-represented, accounting for 15.5 per cent of the total number of students in the department (their share of the same department in the IUTs is only 9 per cent). The same is true of the daughters of both senior and middle-level executives. These three categories - the daughters of senior and middle-level executives and the sons of senior executives - together make up 55

FRANCE

Table 16 : DISTRIBUTION OF STUDENTS BY DEPARTMENT, BY SEX AND BY FATHER'S OCCUPATION

Sex	Occupation	Electrical Engineering	Mechanical Engineering	Physical Measurement	Public administration and business management	Careers in social work	Computer science	Careers in information	Marketing	Total									
MALE	Professional and managerial workers	6.3	16.6	8.6	17.7	16.7	9.3	13.5	25.4	3.8	2.4	6.2	9.5	15.5	13.0	9.3	5.9	9.3	100
	Middle level executives	16.1	26.2	17.4	22.2	18.7	6.6	15.7	18.1	2.9	1.1	13.5	12.7	11.3	5.8	18.5	7.3	15.1	100
	Clerical workers	21.7	37.7	17.7	24.1	15.6	5.8	11.6	14.4	4.9	0.8	10.4	10.5	4.2	2.3	10.2	4.3	14.1	100
	Shopkeepers, craftsmen	10.3	29.1	12.0	26.6	10.4	6.3	10.7	21.5	2.9	1.3	5.0	8.2	3.5	3.2	5.6	3.8	8.7	100
	Farmers	9.8	35.5	11.4	32.3	9.4	7.3	4.7	12.1	0	0	3.1	6.4	2.3	3.2	3.7	3.2	6.8	100
	Supervisors, industrial workers	21.0	34.2	22.9	29.1	6.3	2.8	9.7	11.3	0.9	0.4	17.7	16.7	4.2	2.2	10.2	4.0	15.1	100
	Retired, no occupation	4.7	37.5	3.4	21.4	0	0	10.7	0	0	0	21.4	0	1.8	0	3.7	7.1	3.1	100
	No reply	5.4	27.6	6.0	24.1	8.3	3.2	13.8	0.9	1.2	4.6	13.8	2.8	4.6	4.6	5.7	4.8	4.8	100
	Professional and managerial workers	0.7	2.3	0	0	6.2	4.6	6.3	15.5	32.7	26.4	7.3	14.7	26.7	23.5	8.3	7.0	7.1	100
	Middle level executives	1.3	6.3	0	0	1.0	1.0	7.5	25.0	25.0	27.1	6.5	17.7	12.7	18.7	3.7	4.2	5.3	100
FEMALE	Clerical workers	0.2	2.8	0.3	2.8	0	0	2.8	25.0	6.7	19.4	3.8	27.8	4.2	16.7	1.8	5.6	2.0	100
	Shopkeepers, craftsmen	0.2	2.4	0	0	3.1	7.1	3.1	23.8	3.8	9.5	3.5	21.4	4.2	14.3	8.3	21.4	2.3	100
	Farmers	0.2	5.9	0	0	3.1	11.5	0.9	11.5	6.7	26.9	4.2	42.3	0	0	0.9	3.9	1.4	100
	Supervisors, industrial workers	1.6	10.4	0.3	1.5	0	0	5.3	25.4	12.5	19.4	6.5	25.4	4.2	9.0	5.6	9.0	3.7	100
	Retired, no occupation	0	0	0	0	0	0	0.6	28.6	0	0	0.7	28.6	0	0	0	42.9	0.4	100
	No reply	0.4	10.0	0	0	1.0	5.0	1.6	25.0	0	0	1.9	25.0	2.8	20.0	2.8	15.0	1.1	100
	Total, all categories combined	100	24.5	100	19.2	100	5.3	100	17.4	100	5.7	100	14.2	100	7.8	100	5.3	1 824	100

per cent of the total number of students in the department, compared with only 22 per cent in the IUTs.

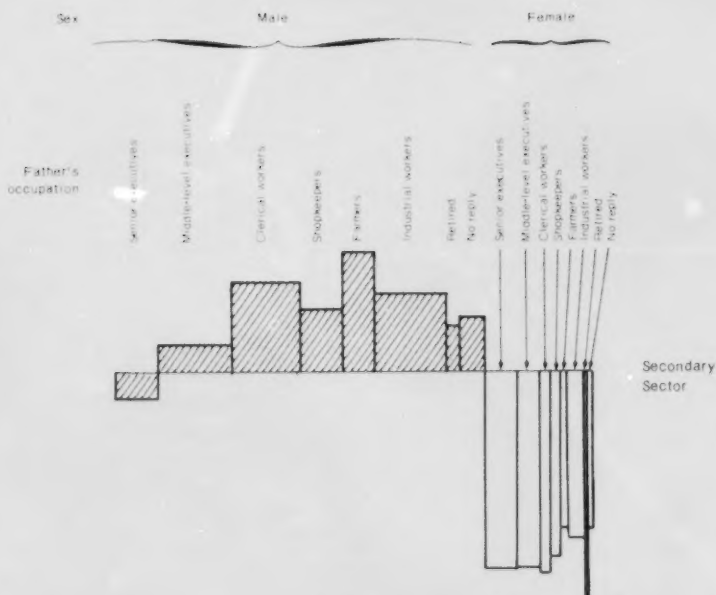
Lastly, the representation of the various social groups in the department of marketing techniques is proportional to the numerical importance of each social category.

If the above remarks are summed up by grouping the departments in two sectors - secondary and tertiary, as in Figure 38 (cf. also Table O in Annex), the only obvious conclusion to emerge is that the sons of senior executives or professional workers tend to choose the tertiary sector more often than do the other categories of male students.

Figure 38

FRANCE

TYPE OF DEPARTMENT ATTENDED (SECONDARY OR TERTIARY SECTOR)
BY SEX AND FATHER'S OCCUPATION
(Deviation from the mean percentage)



3. Great Britain (cf. Table P in Annex)

As in France and Yugoslavia, almost all the students in the department of technology are male (98 per cent). As in these two countries, there is again a link between social background and the choice of the secondary sector. In Yugoslavia, for example, the highest group in the social scale (professional and managerial workers) was seen to be the least well represented in the secondary sector. This behaviour was peculiar to senior and middle-level executives; in Great Britain, however, the tendency is more widespread and the lower down the social scale one moves, the more prevalent becomes the choice of the secondary sector.

Thus, while 23 per cent of the sons of professional and managerial workers are in the department of technology, the proportion increases to 26 per cent for middle-level executives, 30 per cent for clerical workers, 38 per cent for skilled workers and in the region of 50 per cent for the remaining categories, i.e. 50 per cent for semi-skilled workers and 46 per cent for unskilled workers.

In the science department, representation is proportionate to the numbers in the various occupational categories. 77 per cent of the students are male (which is almost the same as the overall proportion of male students in polytechnics - 76 per cent). (1)

In the "administration, business and social studies" department, 68 per cent of students are male (which is a lower proportion than in polytechnics as a whole : 76 per cent).

The same phenomenon occurs in this department as in technology, but in this case, is true of both sexes. For either sex, the higher the category in the social scale, the more students from this category there are in the department.

For example, 89.5 per cent of the daughters of professional and managerial workers are in this department. The proportion, then, falls to 84 per cent for the daughters of middle-level executives, 73 per cent for those of clerical workers and 74 per cent for those of skilled workers. (2) Next come the sons of senior and middle-level executives, who account for 61 per cent, and then the proportion falls steadily to 53 per cent for the sons of clerical workers, 48 per cent for those of skilled workers, 34 per cent for those of semi-skilled workers and, finally, 31 per cent for the sons of unskilled workers. (3)

- 1) Because science studies usually lead to careers in the secondary rather than in the tertiary sector, this department is classified under the first heading.
- 2) The daughters of semi-skilled and unskilled workers are too few for the figures to be of any significance.
- 3) As far as arts and languages are concerned, the numbers involved are really too small for any conclusion to be drawn; in our sample there are only 16 people in the department.

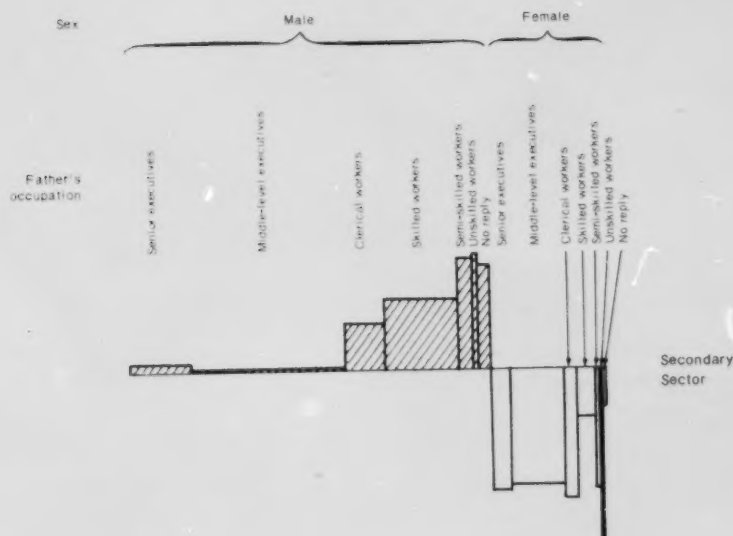
In order to sum up the above remarks, the departments were grouped according to sector of economic activity (secondary, tertiary) (cf. Table Q in Annex and Figure 39 below).

Figure 39

GREAT BRITAIN

TYPE OF DEPARTMENT ATTENDED (SECONDARY OR TERTIARY SECTOR)
BY SEX AND BY FATHER'S OCCUPATION
(Deviation from the mean percentage)

Deviation from the mean percentage



In studying the profile for the secondary sector, we find the phenomenon described above, i.e. the relationship between the position in the social scale and the degree of participation in this type of education. It is worth noting that this relationship between social class and field of study is less marked for female students by comparison with the analysis by department, particularly administration, business and social studies.

In conclusion, it is noticeable that in Great Britain social background is more closely linked with choice of studies than in France or Yugoslavia. (1)

Previous level of attainment

The students' level of attainment in secondary education is assessed differently in the three countries :

- In Great Britain, the criterion used is the number of Advanced Level certificates obtained. Three categories may be distinguished :
 1. low level, i.e. students with no "A" levels, or only one;
 2. middle level, i.e. students with two "A" levels (which is the minimum requirement for university entrance);
 3. high level, i.e. students with three or more "A" levels.
- In France, the only qualification at the end of secondary education is the "Baccalauréat", with various grades of distinction. In our sample, there are few students who obtained distinction; we therefore thought that a good indicator of success in secondary education might be the number of repeats during the student's school career. A student who has no difficulty in following the instruction will finish his secondary education without any repeats, while those who do not find it so easy will have one or more repeats. We accordingly distinguished three categories :
 1. low level, i.e. at least two repeats;
 2. middle level, i.e. only one repeat;
 3. high level, i.e. no repeats.
- In Yugoslavia, school leavers are given a performance rating corresponding to :
 1. low level, "pass";
 2. middle level, "good";
 3. high level, "very good" or "excellent".

Low-level students account for 18 per cent of the total in Great Britain, 23 per cent in France and 11 per cent in Yugoslavia.

39 per cent of students are of middle level in Great Britain, 46 per cent in France and 52 per cent in Yugoslavia.

In Great Britain, 42 per cent of students are high-level, in France 31 per cent and in Yugoslavia 37 per cent.

1) It should also be noted that in France this relationship applies to both senior and middle-level executives, whereas in Yugoslavia it applies solely to the senior professional and managerial staff.

These figures are given in order to throw some light on the explanations which follow; no country comparison is possible in view of the heterogeneity of the categories.

In order to be able to examine the different student categories in detail - low, middle or high levels of attainment - we shall identify for each country homogeneous sub-groups according to sex and age, using the same distinction between younger and older as before. Similarly, the groups will be homogeneous for social background as defined by reference to the division of father's occupation into two categories : manual and non-manual (the relevance of this dichotomy has already been appreciated). In this way, we identified eight sub-groups which are numerically unequal, but are relatively homogeneous. Thus, there are young male students of upper class background, young male students of lower class background and so on - just one criterion changing from one group to the next.

Looking at the results country by country, the following facts emerge :

- Great Britain (cf. Table R in Annex)

1. It is usually older boys from lower class backgrounds who have a low level of attainment; whereas low-level students account for only 18 per cent of the total sample, the proportion rises to 51 per cent with regard to older boys from lower class backgrounds.

In the same way, older boys from upper class backgrounds are also well represented in this category (24 per cent).

2. At middle level, three sub-groups are above the mean, which is 39 per cent : young girls from upper class backgrounds (51 per cent), young boys from upper class backgrounds (44 per cent) and, lastly, young boys from lower class backgrounds (47 per cent).

3. At high level, the only categories above the mean (42 per cent) are young girls from lower class backgrounds (54 per cent), older girls from upper class backgrounds (51 per cent) and older girls from lower class backgrounds. Among male students, only young boys from upper class backgrounds are above the mean (47 per cent).

If we consider only the possibility of university entrance, which requires at least two "A" levels, we find that, for the same age and social background, there are always more girls who reach the required standard than there are boys (91.1 per cent compared with 76.6 per cent).

Among female students, young girls from upper class backgrounds usually have the minimum level required, while the other categories tend to be of higher level.

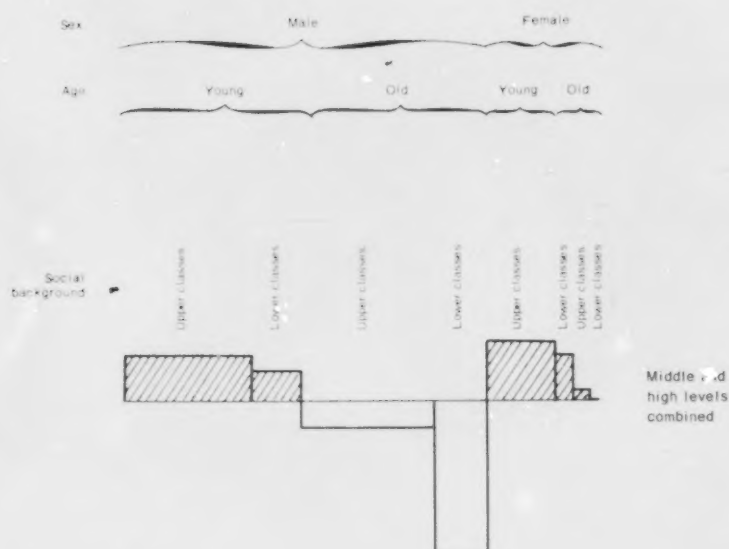
However, the same is not true of male students; in their case the order is the following : the biggest group with two or more

"A levels" is composed of young people of upper class background (91 per cent), next come young people of lower class background (83 per cent), then older students from the upper classes (76 per cent) and, lastly, older students from the lower classes (49 per cent).

Figure 40

GREAT BRITAIN

PREVIOUS LEVEL OF ATTAINMENT ACCORDING
TO SEX, AGE AND SOCIAL BACKGROUND
(Deviation from the mean percentage)



If we wish to determine the relative importance of the variables linked with attainment, we find that, all other things being equal, girls have a better attainment level than boys, particularly when the latter are older and from lower class backgrounds. We also find that age is a very important differentiating factor, particularly in the case of boys (the oldest have the lowest attainment levels), and that social background strengthens the effect of the age factor. All other things being equal, the attainment level is lower among students of lower class background.

- France (cf. Table S in Annex and Figure 41)

1. At the lowest level, i.e. those who have repeated at least two years, the only sub-groups above the mean (23 per cent) are the older ones, which is perfectly normal in view of our choice of criterion. The most numerous students in this category are older boys of upper class background (45 per cent), while those of lower class background make up only 32 per cent. As far as girls are concerned, the lowest attainment level is characteristic of older students from both upper and lower class backgrounds (52 per cent and 51 per cent respectively).

2. At middle level only one group is definitely above the mean of 46 per cent : young male students of upper class background (59 per cent).

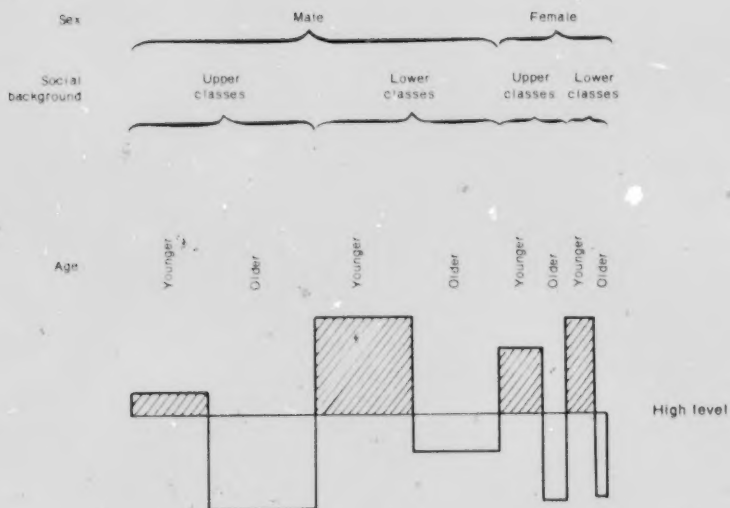
3. At high level, it is mainly the younger groups who are above the mean of 31 per cent, but in the case of both boys and girls, the best represented groups are those from lower class backgrounds (52 per cent for boys and 51 per cent for girls).

In conclusion, we see that the influence of the sex variable is present in France, but is less marked than in Great Britain; girls generally have better attainment levels than boys. As far as social background is concerned, however, the situation is the reverse of that in Great Britain; assuming the same age and sex, it is students of lower class background who are most frequently of above average standard. It can be stated at this juncture that IUTs are attended by the best students of lower class background and the less good students of upper class background. This is the reverse of the situation in Great Britain, where the best students in polytechnics tend to come from upper class families, while the poorer ones come from lower class families.

Figure 41

FRANCE

PREVIOUS LEVEL OF ATTAINMENT BY SEX,
AGE AND SOCIAL BACKGROUND
(Deviation from the mean percentage)



- Yugoslavia (cf. Table T in Annex and Figure 42)

1. At the lowest level, we again find mainly boys, only one female group being above the mean of 11 per cent (older girls of lower class background - 12.5 per cent). On the other hand, all the male groups are either equal to the mean or above it in the following order : younger boys from upper class families (16 per cent); older boys from upper class families (15 per cent); older boys from lower class families (14 per cent); and, lastly, younger boys from lower class families (11 per cent). A comparison between

boys and girls shows that the former usually have a lower level of attainment than the latter (and this applies to the whole of the student population of the Viša Škola).

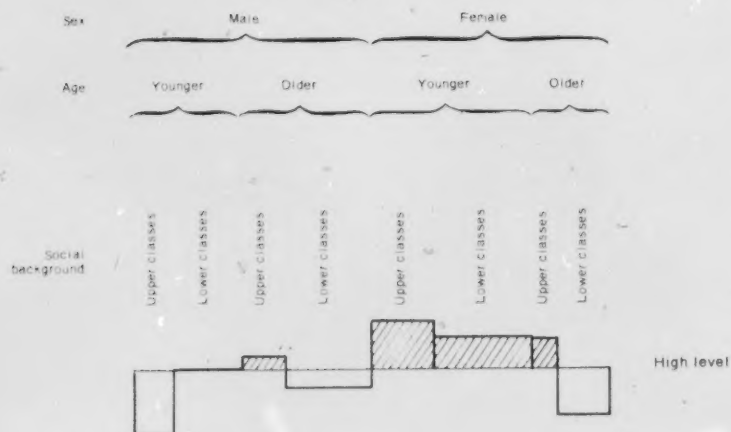
2. At middle level, two groups are above the mean of 52 per cent, younger boys of upper class background and older girls of lower class background (61 per cent in both cases).

3. At high level, three groups of girls are above the mean of 37 per cent : younger girls of upper class background (47 per cent), younger girls of lower class background (43 per cent) and older girls of upper class background (43 per cent). Only one group of boys is above the mean : older boys from upper class families (39.5 per cent).

Figure 42

YUGOSLAVIA

PREVIOUS LEVEL OF ATTAINMENT BY SEX, AGE AND SOCIAL BACKGROUND
(Deviation from the mean percentage)



In conclusion, it is clear that the decisive variable is sex; girls have a higher attainment level than boys. However, girls do differ in attainment according to age and socio-occupational category; younger girls tend to reach a higher level than older ones, and at the same age girls from upper class families usually have a better attainment level than those from lower class families. (1)

Lastly, it can safely be said that Viša Škola are attended by girls of excellent or average ability from lower class backgrounds. The boys, on the other hand, are generally of average or low ability. It is interesting to observe that the Viša Škola contain only 4 per cent of boys of good ability from upper class backgrounds.

Thus, there is a different situation in each of the three countries :

- in Great Britain, the bulk of the better students are of upper class background (and younger rather than older). Here it is the social background variable which is decisive.
- In France, the younger students tend to be the better ones, especially those of lower class background. Age in this case is the decisive variable.
- In Yugoslavia, girls are the best students (particularly when younger). In this instance, sex is the decisive variable.

Before attempting a comprehensive interpretation of the characteristics of the different sub-groups another variable can be introduced into the analysis - namely the choice of discipline, in relation to the previous level of attainment.

Subject chosen according to sex, social background and level of attainment

The same variables are used in this section as before, i.e. we take a number of groups which are homogeneous with regard to sex, social background (upper or lower class) and attainment level (low, middle, high). We then look at the behaviour of each of the twelve groups (2) thus formed in regard to choice of subject.

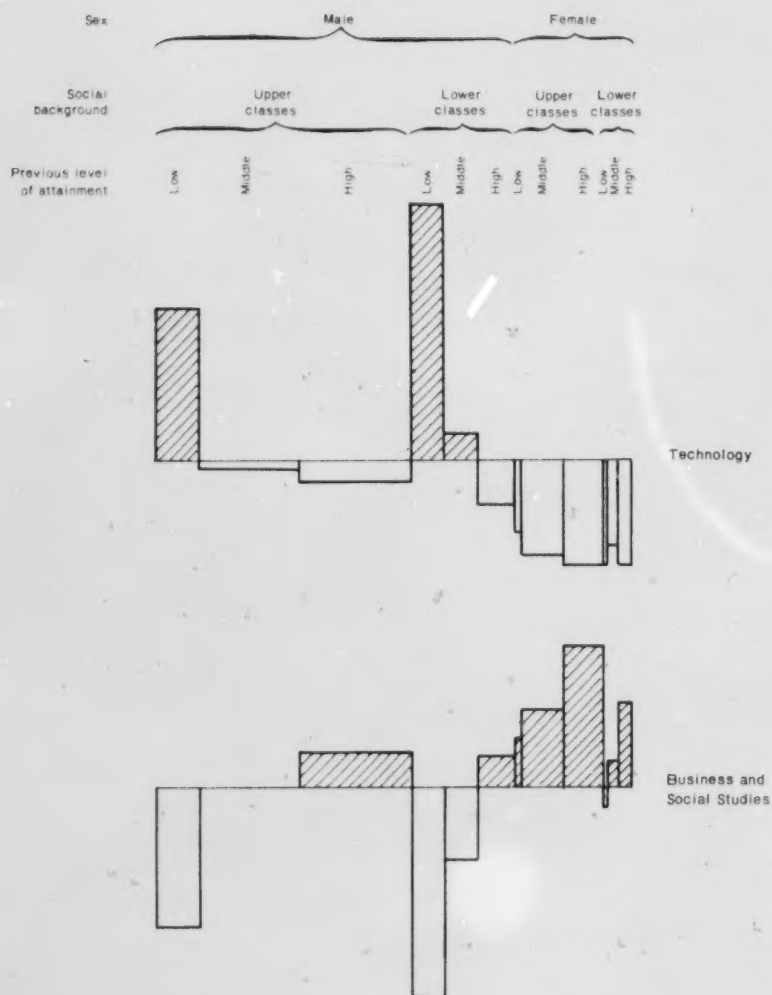
- 1) It should be said that the only consequence of bringing the type of studies into the analysis is to show that 3/4 of the older girls of upper class background and better than average ability are part-time students, which suggests that the interruption of their studies was due to considerations other than academic ones, and that resumption was to some extent prompted by the success achieved earlier.
- 2) Boys of low-level attainment from upper class families, boys of middle-level attainments from upper class families, then boys of high-level attainment etc., ending with girls of high-level attainment.

- Great Britain (cf. Table U in Annex and Figure 43)

Figure 43

GREAT BRITAIN

TYPE OF DEPARTMENT ATTENDED, BY SEX, SOCIAL
BACKGROUND AND PREVIOUS LEVEL OF ATTAINMENT
(Deviation from mean percentage)



It emerges that the "technology" department is above all chosen by boys of low attainment (i.e. 1 or 0 "A levels"), and this what-ever their social background.

A few figures illustrate the extent of this phenomenon; the department of technology comprises 23 per cent of all the students in the sample, but this percentage increases to 77 per cent in the case of boys of low attainment and from lower class families.

In other words, it is as if the most gifted students refuse to study technology, which is chosen by only the less able students. It should be emphasized that this is as true of students of upper class background as of the others.

The situation is reversed in the department of "administration, business and social studies", which tends to be chosen by high attainment students of both sexes, irrespective of social background.

For all sub-groups, the numbers of students who choose this department increase as the level of attainment rises :

- it contains, for example, 31 per cent of boys of upper class background and low attainment, 62 per cent of those of upper class background and middle-level attainment and 69 per cent of those from the same class, but with high attainment.

All the socio-occupational categories display the same tendency; it has to be said, however, that given the same sex and attainment, the proportion of students from the upper classes is always greater than that from the lower classes. To sum up, we find that students of upper class background choose tertiary sector departments, and that the tertiary sector also tends to attract the most gifted students (it should not be forgotten that this is much more the case in Great Britain than in France or Yugoslavia, as will be seen below).

- France (cf. Table V in Annex and Figure 44)

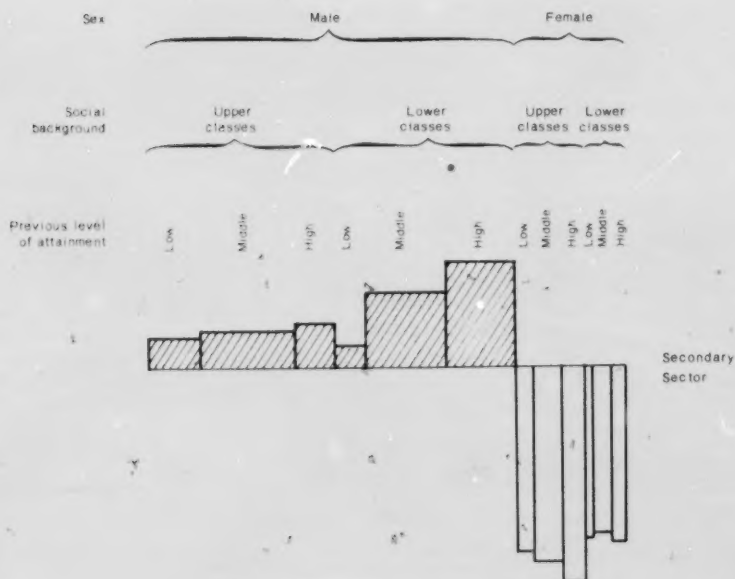
Male students in France do not have the same preferences as their British counterparts, and this is true of all the departments in the secondary sector; the higher the level of attainment, the greater the tendency to choose a secondary sector subject. Boys from upper class families and of low, middle and high levels respectively, choose the secondary sector in the following proportions : 55.5, 57 and 58 per cent. In the case of boys of lower class background, the differences are even more marked, being 53, 65 and 71 per cent, respectively.

It goes without saying that the situation is reversed in the tertiary sector; the higher their level of attainment, the less male students tend to choose tertiary sector departments.

Figure 44

FRANCE

TYPE OF DEPARTMENT ATTENDED (SECONDARY OR TERTIARY SECTOR)
BY SEX, SOCIAL BACKGROUND AND PREVIOUS LEVEL OF ATTAINMENT
(Deviation from mean percentage)



As in Great Britain, however, and as already mentioned, students of upper class background are more inclined to choose tertiary sector departments than are those of lower class background; moreover, this is true of both male and female students. The latter, however, tend on the whole not to have the same preferences as male students; thus, the tertiary sector attracts a lot of female students with high attainment levels. (1)

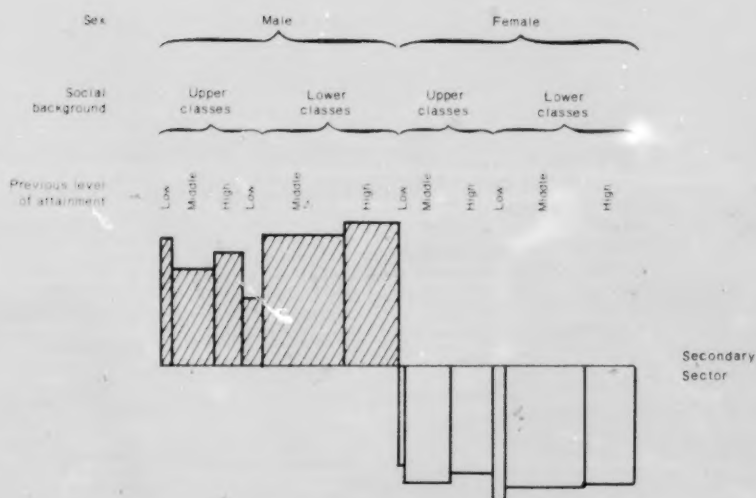
- 1) It must not be forgotten, though, that these groups are hardly comparable, since girls are very much in the majority in the tertiary sector, but are greatly outnumbered by boys in the secondary sector.

- Yugoslavia (cf. Table W in Annex and Figure 45)

Figure 45

YUGOSLAVIA

TYPE OF DEPARTMENT ATTENDED (SECONDARY OR TERTIARY SECTOR)
BY SEX, SOCIAL BACKGROUND AND PREVIOUS LEVEL OF ATTAINMENT
(Deviation from mean percentage)



The situation in Yugoslavia is, in many ways, similar to that in France. (1) In the first place, the secondary sector is preferred by those with high attainment levels, with the exception, however, of one group, those of upper class background and low attainment level. For the high and middle levels, generally speaking, the higher the level of attainment, the greater is the tendency to choose the secondary

- 1) It should be mentioned that as far as this variable is concerned, the distinction between full-time and part-time students makes very little difference.

sector. The proportions are moreover larger in the case of students from lower class families (61 and 64 per cent, respectively) than in that of students from upper class families (54 and 58 per cent).

90 per cent of female students choose the tertiary sector. However, distribution according to the department is uneven, as can be seen from Table X in Annex and Figure 46. The secondary sector has been divided into the agricultural (1) and technical departments, and the tertiary sector into teaching and the services.

The preferences of female students vary with regard to the choice between teaching or the services. Teaching tends to be chosen by girls with a high level of attainment. However, given equal attainment levels, it is more popular with girls from lower class families than with those of upper class background. The situation is reversed in the services, which tend to be preferred by girls of upper class background and low attainment.

Tentative interpretation and provisional conclusions

The above analysis of our three student populations confirms what was said in Chapter I, i.e. that male and female students do not enrol in particular areas of study in the same proportions.

In all three countries, the vast majority of female students opt for subjects within the tertiary sector, while male students prefer secondary sector subjects. This distribution reflects the general situation in society as a whole, and corresponds to the traditional division of labour. The bulk of technicians in the secondary sector are men; in the tertiary sector, on the other hand, technical jobs requiring a certain degree of skill are increasingly being held by women.

However, this general observation should immediately be qualified by a number of specific comments. In SCIs of high prestige :

1. the number of male students is increasing rapidly, even in the tertiary sector;
2. there are more students of upper class background;
3. the average age of students is lower.

If we look at the three types of institution analysed, they can be seen to fall into a definite hierarchy with polytechnics at the top, IUTs in the middle and Viša Škola at the bottom.

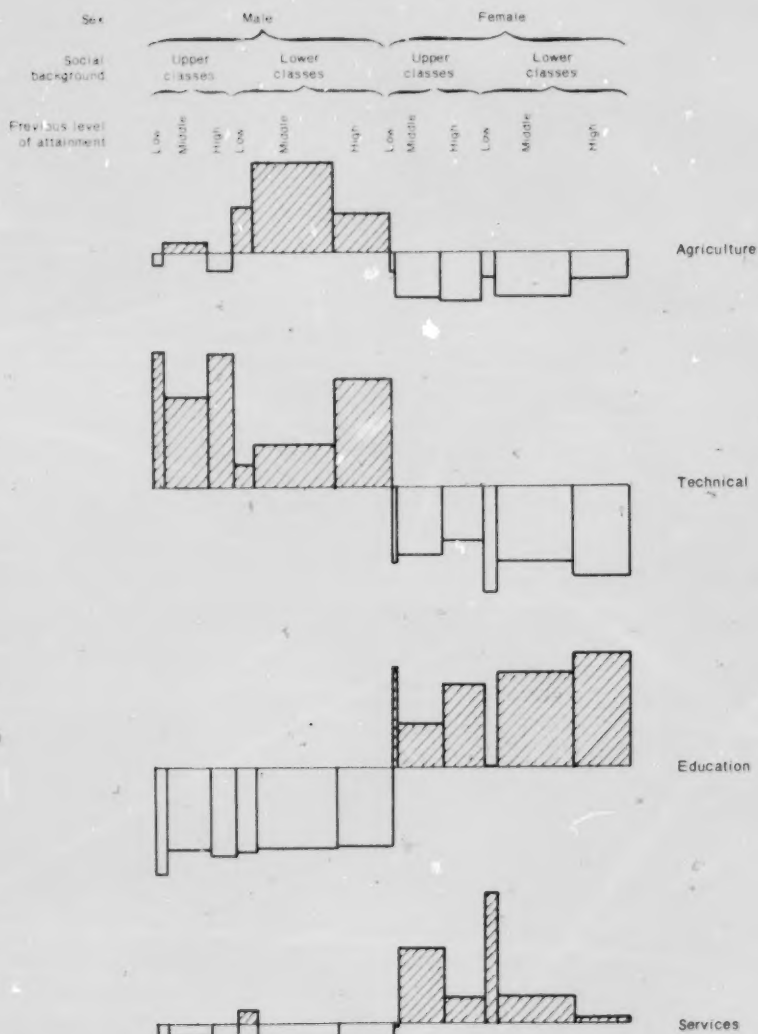
This assessment is confirmed when one analyses the level of attainment of students in SCIs. As has already been said, the best students at polytechnics include the sons and daughters of upper class families.

- 1) Obviously, agriculture does not belong to the secondary sector, but we have included it in this sector until now.

Figure 46

YUGOSLAVIA

TYPE OF STUDIES BY SEX, SOCIAL BACKGROUND
AND PREVIOUS LEVEL OF ATTAINMENT
(Deviation from mean percentage)



It therefore seems reasonable to assume that if young students of high attainment from upper class backgrounds do not hesitate to go to polytechnics, it is because they consider these institutions to carry sufficient prestige, or simply to be comparable to universities since, being equipped with good qualifications, they could have gone to university. This is, however, no more than a hypothesis which we shall endeavour to verify later in this study.

Another question to which no clear answer is forthcoming on the basis of the results described so far concerns the different factors affecting choice of sector. To be more precise, we can find no ready answer as to why the technology sector in Great Britain should be chosen by the vast majority of the less academically gifted students on the one hand, and those of lower class background on the other, while in IUTs the majority of secondary sector departments are chosen by the best students.

We expect to find some clues to the answers to these questions by analysing the reasons for the choice of studies in SCIs, and considering students' opinions of these institutions.

Chapter III

OPINIONS AND MOTIVATION OF STUDENTS IN SHORT-CYCLE HIGHER EDUCATION INSTITUTIONS

The study of the general statistical data and also of the socio-cultural characteristics of students, has, we think, enabled us to give a fairly clear idea :

- of the place of short-cycle higher institutions (SCIs) in higher education in each of the three countries;
- of the characteristics of students attending them.

The question now is how these objective data are viewed subjectively by the students. It is in fact essential, in order to make an assessment of short-cycle higher education, to have an objective understanding of the reality as well as the impressions, judgments, and projects of those who experience this type of education.

In this chapter, therefore, we shall attempt to relate the findings described in earlier chapters to the students' replies to the various questions put to them.

The first question will concern the choice of studies, or how students came to enter an SCI.

From the point of view of their situation at the time of the survey, this first question relates to the past. We shall then consider the present : how do the students view the institution in which they are studying.

Finally, we shall study how students envisage their future and what their future plans are.

I. CHOICE OF STUDIES

The student's presence in an SCI is the result of a decision taken in the past. We shall first consider the moment of this decision and the circumstances in which it was taken, next the reasons given to justify the choice and, finally, the outside influences of which the student is aware.

The moment of decision

The moment at which a decision is taken to enter an SCI provides an interesting criterion for differentiating two types of student : those who have really chosen this type of training and those who have been more or less forced to do so by circumstances. In the latter cases, the decision will have been taken at the last moment, that is in the last months of secondary school, or after some such occurrence as examination failure.

As the survey carried out in Great Britain included no questions on the moment of decision, we can only compare France (1) and Yugoslavia.

In both countries, almost three-quarters of the students took their decision "at the last moment" : in France, 75 per cent took the decision in the last class of secondary education, in Yugoslavia, 20 per cent also took it in the last class of secondary education, and 53 per cent said that they had decided "just before". Cases in which the decision is taken just about the time of entry are particularly numerous among part-time students (64 per cent).

Cases in which the choice was made a long time in advance, during secondary education, represent only 8 per cent in France and 16 per cent in Yugoslavia.

As we see, students who at an early stage intended to follow this type of education, and who may therefore be assumed to be quite strongly motivated, are relatively few. The majority of students took their decision immediately before entering the SCI, in circumstances which we shall now study.

Occupation between end of secondary education and admission to SCI

There are four cases to be considered : immediate entry, entry preceded by study, by employment or by another occupation (in particular military service); (see Table 17 below).

In the first case, which is the most frequent in all countries, students entered SCIs immediately after completing their secondary education : 76 per cent of students in France, 50 per cent in Great Britain and 69 per cent of full-time students in Yugoslavia were in this category. 67 per cent of the part-time students interrupted their studies and started work. They must therefore be excluded from comparisons relating to the moment of decision.

When entry is immediate, it may be assumed that students decided during their secondary education to study in an SCI. We have considered

1) Since in France the IUTs (University Institutes of Technology) were set up only recently one cannot expect the decision to enter to have been taken many years in advance.

the social characteristics of this sub-population in each country. (1)

FRANCE, GREAT BRITAIN, YUGOSLAVIA

Table 17 : STUDENTS' ACTIVITIES BETWEEN THE END OF SECONDARY SCHOOL AND ENTRY INTO SHORT-CYCLE HIGHER EDUCATION

Activity	Great Britain	France	Yugoslavia	
			Full-time	Part-time
Immediate entry	50.2	75.7	68.7	13.7
Studies	23.1	13.9	11.7	4.2
Employment	23.8	7.7	8.6	66.9
Other activities, including military service	2.9	2.7	11.0	15.3
Total	100 = 985	100 = 1 324	100 = 978	100 = 432

1. France

As we have seen, 8 per cent of students took the decision to study in a SCI before they reached the last class of secondary education and 75 per cent in the last class. 83 per cent, therefore, took the decision in the course of their secondary education; we note (cf. Table 18) that this proportion varies according to the social-occupational category of the parents.

The lowest percentage, in fact, corresponds to students from the highest category : 67 per cent of the students whose fathers are professional or managerial workers made their choice before the end of their secondary education, while for those with a more modest background the proportion equals or exceeds 90 per cent (90 per cent for industrial workers and 92 per cent for farmers). Children from more modest backgrounds, therefore, rarely, if ever, envisage anything other than IUT.

1) Except in the case of Great Britain, where the question concerning the moment of decision was not put.

FRANCE

Table 18 : DISTRIBUTION OF STUDENTS BY FATHER'S OCCUPATION
AND TIME OF DECISION TO ENTER AN IUT

Father's occupation	During second- ary education	At another time	Total	
Professional and managerial workers	67.1	32.9	100	(16.3)
Middle-level executives	79.5	20.5	100	(20.3)
Clerical workers	88.7	11.2	100	(16.1)
Shopkeepers and craftsmen	84.5	15.5	100	(11.0)
Farmers	92.0	8.0	100	(8.2)
Industrial workers	90.4	9.6	100	(18.7)
Retired, no occupation	84.1	15.9	100	(3.5)
No reply	86.0	14.0	100	(5.9)
Total, all categories combined	83.1	16.9	100 1 824	(100)

2. Yugoslavia (cf. Table 19)

In Yugoslavia, for full-time students (the only sub-population considered), there are also differences between the social classes, but these are less marked : the proportion of students who took the decision to enter the Visa Skola during their secondary education varies from 40 per cent (for the children of professional and managerial workers) to 47 per cent (for unskilled manual workers).

We shall now consider those who did not enter the SCI immediately after completing their secondary education, but who followed other courses of study, took a job or had some other activity in the interval (military service, for example).

The proportion of those who studied before entering the SCI is 23 per cent in Great Britain, 14 per cent in France, and 9 per cent in Yugoslavia. The differences are considerable, but what is even more important is the fact that these studies were abandoned in all cases in France and Yugoslavia, whereas they were successfully completed in one case out of two in Great Britain.

These facts can be understood only by examining the type of studies undertaken : out of 100 British students who studied before entering the polytechnic 76 went to Colleges of Further Education.

YUGOSLAVIA

Table 19 : DISTRIBUTION OF STUDENTS BY FATHER'S OCCUPATION
AND TIME OF DECISION TO ENTER A VIŠA ŠKOLA
(Full-time students)

Father's occupation	During second- ary education	At another time	Total
Professional and managerial workers	39.9	60.1	100 (16.6)
Clerical workers	42.0	58.0	100 (20.5)
Industrial workers	43.5	56.5	100 (21.9)
Unskilled workers	46.9	53.1	100 (18.1)
Farmers	44.8	55.2	100 (16.7)
No reply	42.6	57.4	100 (6.2)
Total, all categories combined	43.4	56.6	100 = 978 (100)

(Part-time students)

Total, all categories combined	18.3	81.7	100 = 432
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As we saw in Chapter One, these were colleges of lower level than polytechnics, providing various types of vocational training. It is, in fact, quite likely that these are students for whom the first contact with higher education was made through technical education. Having undertaken studies in this field and succeeded, they now feel sufficiently sure of themselves to undertake studies at a higher level in polytechnics.

Another fact that leads us to think that the situation of the polytechnics differs considerably from that of the Viša Škola and the IUTs can be seen from a study of the activities between secondary education and admission to the polytechnic by social origin (see Table 20).

The largest number of those entering polytechnics directly after secondary education are the sons of professional and managerial workers (59 per cent), while only 41 per cent of the children of unskilled workers enter the polytechnics directly.

In the case of students with a more modest background, completion of technical studies has enabled them to enter the polytechnic; whereas if students from the higher social class have undertaken other studies, these were at the university and ended in failure.

GREAT BRITAIN

Table 20 : DISTRIBUTION OF STUDENTS BY FATHER'S OCCUPATION,
AND ACTIVITIES BETWEEN THE END OF SECONDARY SCHOOL AND
ENTRY INTO POLYTECHNICS

Father's occupation	Direct entry	Work	Study	Other, including military service	Total
Professional and managerial workers	58.8	19.4	19.4	2.4	100 (16.8)
Middle-level executives	50.2	19.1	24.1	6.6	100 (44.7)
Clerical workers	51.4	13.1	22.4	13.1	100 (10.9)
Skilled workers	45.7	19.7	22.9	11.7	100 (19.1)
Semi-skilled, unskilled workers and no reply	41.2	15.3	27.1	16.5	100 (8.6)
Total, all categories combined	50.2	18.3	23.1	8.4	100 (100) 285

Although in the case of Yugoslavia, nothing is known concerning the 9 per cent of students who undertook studies, except that these were abandoned, in the case of France information is available on studies before entrance to the IUT, 46.5 per cent in arts and the human sciences, and 53.5 per cent in science or medicine. Out of 100 drop-outs, 30 per cent were due to failure, 49 per cent to lack of interest ("studies were uninteresting, too abstract, doubtful job opportunities"), and in 21 per cent of cases the reasons are unknown.

We can now come back to Table 18 and examine the case of the 17 per cent of students who took the decision to enter the IUT after their secondary education, that is, while engaged in other studies.

Among students from the highest social category, whose fathers were professional and managerial workers, the proportion is 33 per cent, as compared with 8 per cent for sons of farmers and 10 per cent of industrial workers. It would seem therefore that one-third of the students from the higher social categories attempted other studies before "ending up" in an IUT.

We may conclude, therefore, that in France and Yugoslavia there are two different types of behaviour depending on social origin :

- students with more modest backgrounds rarely considered anything other than the SCI : it may be assumed that this was a genuine choice. The SCI, in fact, gives them access to higher education without the uncertainties of general higher education;

- there were more students from a higher social category among those who had undertaken other studies and then abandoned them; for them the SCI is a "lesser evil" enabling them to remain in higher education.

In Great Britain, the situation is the reverse :

- for students from more modest backgrounds, the polytechnic is the culmination of earlier education of a lower level, which enabled them to reach the level required for admission;
- for students from the higher social category, the polytechnic is a continuation of secondary education.

Multiple applications

Since at the end of their secondary education students have a certain freedom of choice, particularly as concerns the possibility of applying for several higher education institutions, it seems one can legitimately take "multiple applications" as an indication of the motivation to enter the SCHE.

It may, in fact, be assumed that a student who has no firm ideas concerning his future will apply for different institutions. Conversely, a student who is determined to enter SCHE will perhaps apply for several institutions, but always of the same type.

There are considerable differences between the three countries as concerns the proportion of students who have applied for other establishments, but in all cases there is a similar social differentiation with regard to applications for long-cycle higher institutions.

1. The country with the lowest proportion of multiple applications is Yugoslavia : 90 per cent of students, in fact, enrolled exclusively in the Viša Škola which they are at present attending (or 4 per cent in another Viša Škola), while only 9 per cent applied for university entrance.

In the case of students who applied for the university, the proportion varies according to social origin from 15 per cent for students from the highest social group, to 6 per cent for those whose fathers are farmers. There is thus a link between social origin and the desire to enter long-cycle higher education, which can be explained by the fact that the higher one rises in the social hierarchy the less one is satisfied to enter SCHE.

2. In France, the proportion of students who applied exclusively for the IUT in which they are studying, or for another IUT, is 74.5 per cent. Only 9 per cent of students attempted to enter long-cycle higher education. As in Yugoslavia, more students from the upper social categories than from other categories made this choice.

Fourteen per cent belonged to the upper social group (professional and managerial), 12 per cent to middle-level executives, and only 7 per cent to the manual workers group. The explanation is probably the same here as for Yugoslavia: students from the higher social classes are less inclined than others to be satisfied with SCHE.

3. In Great Britain, multiple applications were for the university alone and are much more numerous: 64 per cent of students attempted to enter a university and only 35 per cent applied for a polytechnic only.

To understand why in France and Yugoslavia only 9 per cent of students applied for the university (1), while 64 per cent applied in Great Britain, one must consider the place of such institutions in the respective higher education systems. The differences with regard to previous level of attainment, length of studies, prestige, etc. between the universities and the polytechnics are in fact very small and this explains why many students hesitate between one or the other institution. In France and in Yugoslavia, on the other hand, the difference between SCHE and long-cycle higher education is too considerable for there to be more than a very small number of persons equally willing to enter either one or the other.

We should note, finally, that in Great Britain, as in the other countries, the higher the position in the social scale the greater the desire to enter university. While on average the proportion of students who applied for the university is 64 per cent, the figure is 71.5 per cent for the children of professional and managerial workers, 67 per cent for those of middle-executives, but only 59 per cent for those of skilled workers. The phenomenon of social differentiation is evident as in the other countries.

To sum up, in Yugoslavia 90 per cent of students in the Viša Škola applied directly for that institution; in France, the proportion of students who applied only for the IUT is 75 per cent, while in Great Britain only 35 per cent of students applied only for the polytechnics.

In all three countries, the desire for university education is stronger in the upper part of the social scale.

Reasons for the choice of studies

To determine the reasons for the choice of SCHE, a certain number of factors were suggested (2), with the question whether they had had considerable weight, little weight or no weight at all.

- 1) or for a college of engineering in the case of France.
- 2) 10 for Yugoslavia, 12 for France and 14 for Great Britain. The French and Yugoslav motives are very similar, while those for Great Britain are rather different.

FRANCE

Table 21 : STUDENTS' REASONS FOR HAVING ENTERED AN IUT

Reason for choice	a little or consider- able weight	of which consider- able weight	No weight	No reply	Total 100 = 1 824
Short duration of studies	31.6	(31.4)	10.1	8.3	100
Career prospects	62.0	(32.1)	14.4	23.7	100
Easy to find employment afterwards	61.6	(34.1)	18.5	20.0	100
Methods of teaching	56.4	(34.4)	20.6	23.0	100
Training provided	55.3	(27.5)	15.3	29.4	100
Easier studies	51.2	(30.6)	23.3	25.4	100
Because there was no other choice	32.0	(15.8)	45.0	23.0	100
Near to your home	25.5	(15.4)	49.6	24.9	100
Because recruit- ment is selective	17.5	(14.1)	53.7	28.8	100
Prestige of IUTs in France	9.5	(8.9)	61.5	29.0	100
Unable to leave region	8.5	(5.6)	61.5	30.0	100
Prestige of IUT in your town	6.1	(5.4)	65.2	28.7	100

The different factors have been listed in decreasing order of preference for each country, depending on the proportion of students for whom the factors had a little, or considerable, weight. (cf. Tables 21, 22 23).

A study of these tables shows that the first three motives given are the same, though in a different order, for France and Yugoslavia, and correspond entirely to the objectives of the IUTs and the Viša Škola, i.e. short duration of studies and emphasis on the vocational aspect of the training given which is expected to guarantee a good career and, in the first place, make it easy to find a job on completion of studies. For the French student the "short duration of IUT of studies" was, in fact, the main reason for the choice of the IUT (86 per cent said that this reason influenced their choice a great deal or a little). In the case of Yugoslavia, this

motive is also of primary importance as 60.5 per cent of the students in the Viša Škola referred to it. The motive "career prospects" is also mentioned frequently as one which influenced the decision to study in an IUT (62.5 per cent of cases) or in a Viša Škola (63 per cent of cases). Finally, the reason that it was "easy to find a job on completion" was the determining factor for 62 per cent of

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Table 22 : STUDENTS' REASONS FOR HAVING ENTERED A VISA SKOLA

Reason for choice	a little or considerable weight	of which considerable weight	No weight	No reply	Total 100 = 1 410
Career prospects	63.0	(33.8)	15.7	21.3	100
Short duration of studies	60.5	(25.0)	18.9	20.6	100
Easy to find employment afterwards	56.5	(29.1)	19.4	24.0	100
Near to your home	46.0	(33.9)	27.2	26.8	100
Methods of teaching	41.9	(16.1)	29.6	28.4	100
High prestige of the college in which you are now	40.4	(12.1)	32.3	27.2	100
High prestige of Viša Skola in general	36.2	(8.2)	34.6	29.2	100
Easier studies	34.8	(9.6)	36.9	28.3	100
Because there was no other choice	32.2	(21.5)	33.0	34.8	100
Because it is a means of entering university later	29.3	(17.9)	38.2	32.5	100

GREAT BRITAIN

Table 23 : STUDENTS' REASONS FOR HAVING ENTERED A POLYTECHNIC

Reason for choice	a little or consid- erable weight	of which consid- erable weight	No weight	No reply	Total 100 = 985
Interest in actual subject studied	85.7	(47.7)	14.2	0.1	100
Wish to improve level of education	84.7	(49.4)	14.8	0.4	100
Need for specific vocational quali- fications	82.6	(60.5)	17.3	0.1	100
Wish to obtain a degree or diploma	66.8	(46.2)	31.9	1.3	100
Preference for a particular type of attendance	66.7	(35.4)	32.9	0.4	100
Wish to follow a course of a spe- cific duration	59.9	(24.6)	39.5	0.6	100
Wish to be in London	55.7	(23.7)	44.2	0.2	100
Unable to go to University	51.4	(32.2)	48.1	0.5	100
Wish for a partic- ular type of degree or diploma	50.4	(26.4)	47.9	1.7	100
Wish to enter this particular polytechnic	38.9	(11.3)	10.9	0.2	100
Possibility of post- poning entry into active life	31.9	(11.4)	67.1	1.0	100
Wish to remain near home	30.2	(10.9)	69.5	0.3	100
First or only place offered	24.4	(13.4)	75.2	0.4	100
Unable to travel	14.2	(5.8)	85.3	0.5	100

French students and 56.5 per cent of Yugoslav students. (1) The situation is different in Great Britain. Among the three reasons most frequently given for the decision to study in a polytechnic, only one (which moreover comes in third position) refers to the vocational opportunities offered by education in a polytechnic. (2) In 83 per cent of cases, the reason "need for specific vocational qualification" carried a little or considerable weight. The first two reasons given by British students refer to : firstly, "interest in actual subject studied" (86 per cent) and, secondary, to the "wish to improve-level of education" (85 per cent).

These three motives given by students in the polytechnics reflect, as in the Yugoslav and French cases, the objectives laid down for the polytechnics, as described in the first chapter, i.e. to provide education of a high level, but vocationally oriented (unlike universities).

It is, moreover, worth noting that in Great Britain the first reason given concerns the subject studied, which is found interesting, while in France and Yugoslavia (3) the first reason concerns the institution in which the student has enrolled.

This may be explained if one considers that the level of SCIs in France and Yugoslavia is lower than that of the polytechnic in Great Britain. One may assume that when a student is studying in an institution of high prestige he does not seek to justify his presence by its prestige, but rather by the value of the training he receives in it. On the other hand, if the institution does not carry

- 1) The distinction between full-time and part-time students provides an opportunity for some interesting comments on the differences in motivation between the two sub-populations. Thus, we see (cf. Table Y in Annex) that for part-time students the reason most frequently given concerns career prospects, which is normal for people who, for the most part, have already had an occupational activity and, consequently, expect these studies to improve their status. In the second place comes the short duration of studies, but in third place the reason given is : "high prestige of your college". Part-time students are more influenced than full-time students (for whom this reason comes only in sixth position) by the special merits of the institution and, as we will see in their comparisons between Viša Škola and the University, "believe" more in it and in its merits.

The full-time students are more appreciative of the practical aspects of the Viša Škola : "short duration of studies" comes first, followed by "easy to find a job on completion".

- 2) "Short duration of studies" is not a significant factor in the British case, as many students in polytechnics undertake studies of the same duration as university students.
- 3) Except that in Yugoslavia, "training provided" was not suggested to students as a reason.

much prestige, he will tend to justify his presence by the value of the institution to him personally. In this case, the value of the IUT (or the Viša Škola) consists in the short duration and the vocational aspect of the training provided in them. These characteristics make up for the fact that the SCIs do not enjoy the same prestige as long-cycle higher education generally.

It is interesting to note, however, that students seldom consider the decision to study in an SCI as unavoidable. "There was no other choice" is given as a reason in only one-quarter to one-third of cases. In Great Britain, it is the penultimate reason, mentioned only by 24 per cent of students; in Yugoslavia and France, it is mentioned by 32 per cent of students and is among the last on the list.

The external influence on the decision

Two factors must be taken into consideration with regard to a decision of an educational or occupational character; in the first place the source of information that indicates the range of choices available and in the second place the "reference" group which aided in the actual taking of a decision. The source of information may moreover be the reference group.

In the three countries, we see that teachers and friends are the most important sources of information and that the persons who influence the choice are firstly the parents and, secondly, the teachers who are sources of both information and advice.

In France, the teacher was the source of information in 52 per cent of cases, friends in 47 per cent of cases and the mass media in 28 per cent of cases. (1)

Among persons consulted, fathers come first (43 per cent) and then mothers (38.5 per cent), followed by teachers (35 per cent) and friends (23 per cent). The vocational guidance expert had influenced the decision in only 13 per cent of cases, i.e. much less than friends.

In Great Britain, a source of information which appears to have been fairly effective is the booklet given to secondary school leavers, since 53 per cent said they had found useful information in it. Teachers were a source of information in 51.5 per cent of cases, a similar proportion to that in France, parents in 24 per cent of cases and friends in 22 per cent of cases (mass media were a source of information for only 18 per cent of students).

- 1) The total exceeds 100, as replies are not mutually exclusive. Other replies were moreover possible : information from IUT : 17 per cent; family : 11 per cent ; educational information office : 11 per cent, vocational guidance expert : 2 per cent.

The British survey did not include a list of persons consulted, but it was possible to compare the relative influence of teachers and parents by considering the number of cases in which pupils were encouraged to enter a polytechnic, or more generally to enter higher education.

The influence of parents and teachers appears to have been about equal in both cases : in 67 per cent of cases parents encouraged their child to enter higher education (teachers : 56 per cent). These percentages are considerably smaller as regards the specific type of institution attended, since encouragement to enter a polytechnic came from parents in only 11 per cent of cases and from teachers in 15 per cent of cases. In Yugoslavia the replies concerning sources of information cannot be compared directly with those of the other two countries. The question was in fact put in a "closed" form and replies were mutually exclusive, which hardly corresponds to reality. Thus friends were mentioned by 54 per cent of students : it may be supposed that these friends were not only a source of information, but also helped in the taking of a decision. Next come the secondary school teachers who are quoted in 21 per cent of cases, and finally the mass media (12 per cent).

Parents were undoubtedly consulted since it is known that the father was in favour of the decision to enter a Viša Škola in 51 per cent of cases, neutral in 32 per cent of cases and opposed to it in only 3 per cent of cases. Such a low percentage of opposition would be impossible if there had been no prior consultation.

II. STUDENTS' ASSESSMENT OF SCIs

Having examined students' opinions before they entered a SCI, we shall now consider how they view their present situation. They are now in an SCI; what do they think of it ? How do they see it in relation to other higher education institutions ? Would they be prepared eventually to repeat the same experience ? In short, are they satisfied ? These are the questions we shall now try to answer.

Comparison with other higher education institutions

In earlier chapters we were able to get some idea in higher education as a whole on the basis of such criteria as students' educational background, female participation. It is now interesting to compare the objective information with the students' perception and assessment of their own experience.

Here again, it is only possible to compare France and Yugoslavia, as the British survey did not include the same questions.

The French students were asked to say whether they classed their IUT above, on the same level as or below four types of establishment : faculties of arts, faculties of science, "grandes écoles" and "écoles supérieures" and institutes (1), in the light of 11 different criteria (2) which were either general (prestige) or concerned the education given or the training for a future career. (The replies are shown in Table 24 below).

The same comparative criteria were proposed in Yugoslavia, but only with a view to comparisons between the Viša Škola and the Faculties. Table 25 below shows the percentage of students who think that the Viša Škola are above, on the same level as, or below the faculties, according to the criterion considered.

In Great Britain, on the other hand, the only question asked was : Do you think that it is generally easier or more difficult to pursue higher studies in a polytechnic or at the university ? The answers were as follows :

- higher studies easier in a polytechnic than at the university : 62.6 per cent;
- more difficult : 7.4 per cent;
- the same : 9.3 per cent;
- don't know : 19.7 per cent;
- no answer : 0.9 per cent.

As we can see, this question concerned the difficulty of studies according to type of institution and did not ask for an opinion of the relative quality of the two institutions. However, as students know that the institutions where selection is most severe (3) are also those which enjoy the highest prestige, the answers to this question can be taken as a comparative evaluation of polytechnics and the universities.

If we adopt this point of view, the conclusion is at once quite clear : nearly two-thirds of British students regard the universities as on a higher level than the polytechnics.

If we compare this result with the one in Chapter I related to school background of new entrants into polytechnics and universities, we can see that students' views are consistent with reality. They clearly perceive the higher status of universities.

1) See Chapter I, Section 3, for the meaning of these last two categories.

2) Prestige, career opportunities, quality of the teaching given, social advancement, future earnings, good prospects of employment for graduates, interest of the studies, acquisition of a general education, personal fulfilment, preparation for working life, general atmosphere.

3) e.g. Oxford or Cambridge.

FRANCE

Table 24 : STUDENTS' EVALUATION OF IUTs AS COMPARED WITH OTHER HIGHER EDUCATION INSTITUTIONS

	University, Faculty of Arts			University, Faculty of Sciences			"Grandes écoles"			Higher education colleges and institutions		
	above	same level	below	above	same level	below	above	same level	below	above	same level	below
Career opportunities	82.5	10.7	6.7	33.7	44.5	21.7	6.1	25.5	68.4	8.2	49.7	42.1
Quality of teaching	52.7	32.8	14.5	24.2	47.4	28.4	4.8	31.3	63.9	7.7	49.9	42.4
Social advancement	49.8	32.6	17.5	19.6	49.4	31.0	6.3	25.0	68.6	8.3	45.8	45.8
Future earnings	47.2	32.6	20.2	12.9	45.4	41.7	3.4	11.3	85.2	4.7	36.9	58.3
Good employment prospects	79.4	12.8	7.7	41.1	41.1	17.7	9.0	32.8	58.1	12.8	49.1	38.0
Interest in the studies	59.0	27.0	13.9	26.9	51.4	21.7	11.1	45.2	43.7	13.6	57.1	29.2
Acquisition of a general education	20.4	22.6	57.0	23.3	43.8	32.9	8.9	38.6	52.5	10.4	41.6	37.9
Personal fulfillment	32.6	37.2	30.1	25.9	51.5	22.5	16.8	49.6	33.6	16.7	57.9	25.4
Preparation for working life	38.0	7.5	4.5	65.3	27.5	7.2	29.2	42.2	28.6	29.5	52.3	18.2
General atmosphere	50.8	29.6	19.8	42.3	39.5	18.2	31.4	43.6	25.0	30.3	48.8	20.8
Prestige	36.6	25.1	38.2	6.2	36.1	57.7	2.9	5.5	91.5	4.3	33.8	61.9

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Table 25 : STUDENTS' EVALUATION OF THE VIŠA ŠKOLA
AS COMPARED WITH FACULTIES

	Above	Same level	Below	Total
Career opportunities	25.9	45.5	28.6	100
Quality of the teaching	19.0	53.6	27.4	100
Social advancement	14.7	44.4	40.9	100
Future earnings	19.4	35.2	45.4	100
Good employment prospects	29.7	41.0	29.3	100
Interest of the studies	23.3	63.4	13.2	100
Acquisition of a general education	13.7	51.7	36.6	100
Personal fulfilment	15.1	57.3	27.7	100
Preparation for working life	53.4	36.7	9.8	100
General atmosphere	26.6	58.3	15.0	100
Prestige	16.3	48.8	34.9	100

The comparison between institutions in the French case is complicated by the fact that the IUTs are compared with four other types of higher education establishments, and according to eleven criteria. In view of this, there are forty-four opinions to be compared, each opinion being represented by three percentages :

- the percentage of those who consider that for a given criterion and a given establishment, the IUT is higher;
- the percentage of those for whom the levels are the same;
- the percentage of those for whom the IUT is lower.

For purposes of comparison, we shall determine "areas" within which several opinions may be found with similar evaluation.

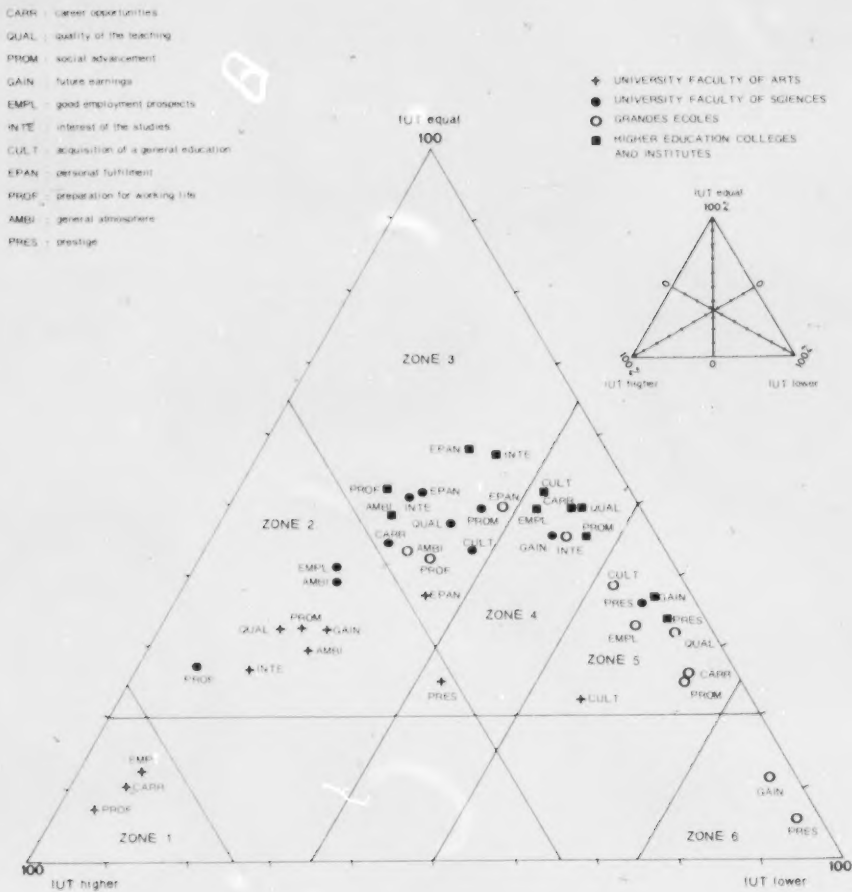
This is how these areas may be defined (see Figure 47 below):(1)

- 1) The representation technique used here is that of the triangular graph based on the fact that in an isosceles triangle the sum of the projections of a point inside the triangle on to its sides is constant and equal to the altitude of the triangle. If that altitude equals 100, each of the points of the triangle will correspond to the sum of three figures which is equal to 100. As each opinion of the IUT is a set of three percentages (IUT higher, IUT the same, IUT lower), each opinion may be represented by a point in the triangle. For example, if a point is in the lefthand corner of the triangle, this would mean that 100 per cent of the students regard the IUT as higher (and therefore 0 per cent the same and 0 per cent lower).

Figure 47

FRANCE

STUDENTS' EVALUATION OF IUTs AS COMPARED
WITH OTHER HIGHER EDUCATION INSTITUTIONS



1. The first area is the one in which at least 75% of the students rate the IUT as higher. This is the area of opinion in which the IUT is regarded as really better.
2. Since the case of absolute equality would correspond to one-third of the students rating the IUT higher, one-third the same and one-third lower, if the percentage of those who regard the IUT as higher is more than one-third (let us say 35 per cent), we can consider this an area where the IUT is simply rated as better. The percentage in this area will therefore be between 35 and 75.
3. The case of equality has just been defined : we shall regard as belonging to this area, in which the IUT is placed on the same level, those opinions where the proportion rating the IUT higher and the proportion rating it lower are in both cases less than 35 per cent. Consequently, the proportion of those who think that the levels are the same will always be more than 30 per cent in this area.
4. Symmetrically with area 2, an area could be constructed for opinions which rate the IUT as lower : the proportion of those who feel that the level of the IUT is lower would merely have to be between 35 and 75 per cent. As many opinions are to be found in this area, we divide it into two. Area 4 will be where the proportion of those rating the IUT lower is between 35 and 55 per cent : these opinions regard the IUT as slightly inferior.
5. Area 5, on the other hand, will be where the proportion of unfavourable opinions is between 55 and 75 per cent. Here it is felt that the IUT is inferior.
6. Lastly, Area 6 will, symmetrically with Area 1, be where more than 75 per cent of the students rate the IUT lower. This area will be where the IUT is regarded as really inferior.

We have therefore defined six sorts of opinion, ranging from almost complete unanimity in one direction to almost complete unanimity in the other, passing through four intermediate stages :

1. IUT really better
2. IUT better
3. IUT the same
4. IUT slightly inferior
5. IUT inferior
6. IUT really inferior.

Having thus built up our measuring instrument, let us now examine what we find by way of opinions in the various areas thus

circumscribed. In each case, we shall take account of the criterion adopted and of the type of establishment with which the IUTs are compared.

1. In the "IUT really better" area we find three opinions relating only to the faculties of arts and all three concerned with the training for employment. The IUT is really superior to the arts faculties as regards preparation for working life, career opportunities and employment prospects for graduates.

This opinion coincides with one of the reasons for creating the IUTs, which were supposed to attract a large number of students away from the arts faculties with few occupational outlets and to offer them in exchange an occupational training suitable for the world of work. It can therefore be claimed here that students still accept this opinion: it should be noted, however, that they have no point of comparison: knowing little about the real situation as regards employment prospects for graduates.

2. In area 2, the IUT is simply regarded as better than the arts faculties according to five criteria, two of which relate to the future prospects after studies at the IUT (social advancement and future earnings) and three to the types of education (interest of the studies, quality of education and general atmosphere). The IUT is also regarded as better than the faculties of science with regard to the preparation for working life in particular and, to a lesser extent, with regard to employment prospects and general atmosphere.

3. The IUT is regarded as being on the same level as the faculties of arts with regard to personal fulfilment, which is linked with general education, an area in which the faculties of arts have relatively high prestige.

The IUT is regarded as being on the same level as the faculties of science according to six criteria out of eleven, in relation to occupational future (career opportunities, social advancement), education (quality, interest of the studies) and individual development (personal fulfilment, acquisition of a general education).

Lastly, the IUT is regarded as on the same level as the "écoles supérieures" and the institutes according to four criteria (preparation for working life, general atmosphere, personal fulfilment, interest of the studies) and as the "grandes écoles" with regard to general atmosphere, personal fulfilment and preparation for working life.

4. The IUT is regarded as slightly inferior to the faculties of science in relation to prospects for future earnings, to the "grandes écoles" for interest of studies and acquisition of a general education, but, above all, to the "écoles supérieures" for 5 criteria out of 11 (good employment prospects, career opportunities, social advancement, interest of studies and quality of education).

5. The IUT is regarded as inferior to the faculties of arts for the acquisition of a general education, to the faculties of science for prestige, to the "écoles supérieures" both for prestige and future earnings and, lastly, to the "grandes écoles" for the quality of education and three criteria relating to students' occupational future (employment prospects, career and social advancement).

6. Lastly, the IUT is really inferior to the "grandes écoles" for prestige and future earnings.

This, too, coincides with a well-established opinion concerning the "grandes écoles" and the future of their graduates.

Only one opinion remains outside the areas described and that is the prestige of the arts faculties on which views are very divided : 37 per cent of the students regard them as inferior to the IUTs, while 38 per cent take the opposite view. This surprising result is explained by the fact that the assessment of prestige takes account of two contradictory criteria : first, general education, with all that this implies in the way of disinterested work, where the arts faculties are regarded as superior to the IUTs, and, secondly, employment prospects, where the arts faculties are considered to be very inferior to the IUTs.

According to whether the student has used one or other criterion in estimating the prestige of the arts faculties, he will place them in terms of prestige above or below the IUTs, seldom on the same level, which explains why this opinion cannot be included in the equality area.

In order to sum up the preceding data, we merely have to see which institution is most often represented in each area; this gives the following result :

- the IUT is regarded as "really better" or simply "better" as compared with the faculties of arts;
- the IUT is placed on the same level as the faculties of science;
- the IUT is regarded as slightly inferior to the "écoles supérieures" and institutes;
- lastly, the IUT is regarded as "inferior" or "really inferior" to the "grandes écoles".

A first comment on this classification is that it is, to a certain extent, realistic : it is quite true that employment prospects are better for IUT graduates than for arts graduates, but that the arts faculties provide a better general education. It is normal for IUT students to feel inferior to those in the "grandes écoles", which enjoy the highest prestige in France.

The assessment of the "écoles supérieures" was made difficult by their great variety and it is normal that they should have been placed between the IUT and the "grandes écoles".

Finally, it is significant that IUT students should feel on an equal footing with the students in the faculties of science, with whom they enjoy the common status of student and more or less identical career prospects, and who are in no better position than they are for acquiring a general education.

It should be noted that students are firmly convinced that the IUTs give a good preparation for working life since they regard themselves in this respect as better placed than the faculties of arts and science and feel that they are on the same level as the "écoles supérieures" and even the "grandes écoles". This shows that the specific character of the IUTs as officially presented is perfectly assimilated and in no way challenged by those who attend them.

In the case of Yugoslavia, where the comparison is only between the Faculties and the Viša Škola, the answers of full-time and part-time can be presented simultaneously. As may be seen from Figure 48 below, two phenomena should be distinguished: opinions are scattered and vary according to the part-time/full-time distinction.

Taking the same percentage areas as in the French case, three views stand out:

1. the Viša Škola are better than the faculties for the preparation for working life;
2. the Viša Škola are slightly inferior to the faculties in the areas of "social advancement" and "future earnings";
3. in all the other criteria, and they are the majority, the Viša Škola and the Faculties are considered equal.

As may be observed very clearly in Figure 48, for nine cases out of eleven, part-time students are much more favourable than full-time students in their assessment of the Viša Škola. For example, full-time students place the "future earnings" criterion in area 5, which means that in their view the Viša Škola are inferior to the Faculties for expected future earnings. On the other hand, part-time students place this criterion in area 3, which means that they regard the Viša Škola and the Faculties as on an equal footing here.

In this same "equality" area 3, where most opinions are to be found, we can see that, for the same criterion, full-time students' opinions are always more to the right on the Figure, which means that they are always more favourable than those of part-time students.

Finally, even for the criterion recognised by all as being better in the Viša Škola than in the Faculties, i.e. preparation for working life, the opinion of part-time students is more favourable

than that of full-time students : in the figure, the opinion of the former is nearer to the "Viša Škola higher" axis.

Comparing the three countries, the opinions given by students may seem paradoxical : first, in Great Britain, where the SCI is nearest to the university, nearly two-thirds of the students see a great difference between the polytechnics and the universities. Conversely, in Yugoslavia, where the Viša Škola are the lowest institutions in the higher education hierarchy, SCHE students rate themselves equal to those in long-cycle higher education. In France, where the situation is between the two, opinions are varied and depend on the type of establishment with which comparison is made.

To explain this paradox, we may make the hypothesis, and the study of student satisfaction will confirm it, that we are faced with a "rationalisation" phenomenon.

Thus, a large proportion of British students (88.5 per cent) had obtained the necessary level for entering university and were therefore in a better position to know what is done there and, in the light of this knowledge, to perceive more clearly the differences between university and polytechnics.

On the other hand, since in view of their previous schooling Viša Škola students had not envisaged pursuing university studies (only 10 per cent of them had applied to any Faculty), they generally knew little about the university situation, from which they may have been psychologically too far removed. Consequently, the differences between the university and the Visa Skola are blurred. The only point on which their ideas are clear is that the social status of Faculty graduates is higher than that of Visa Skola graduates and that the former are certain to find employment easily.

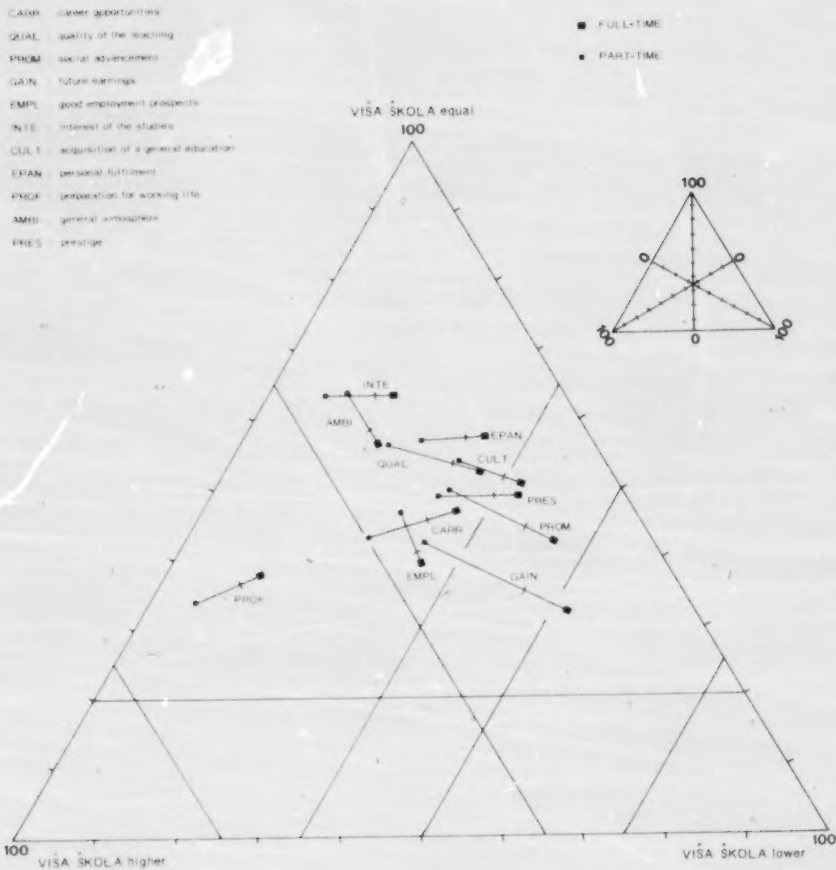
In the Yugoslav case, the distinction between full-time and part-time students also confirms the above opinion : it is the students who are least well-informed about the relative situation of the Faculties and the Visa Skola who are most favourable to the latter. Thus, part-time students, i.e. a majority of older students, who are already out in the world of work and have interrupted their studies know least about higher education and are also most favourable to the Visa Skola. Full-time students, who for their part are younger and could go to a Faculty, are much more realistic and know very well, for example, that Faculty-trained executives will generally have a better career than staff with a Visa Skola background.

In France, finally, in the same way as in Yugoslavia, the IUT students only have firm views on the social status of students of the "grandes écoles" and on the good employment prospects offered by IUT training.

Figure 48

YUGOSLAVIA

FULL-TIME AND PART-TIME STUDENTS' EVALUATION OF VIŠA ŠKOLA
AS COMPARED TO FACULTIES



Satisfaction

In order to assess the degree of satisfaction of SCI students in each of the three countries, each student was asked whether in the light of his experience he would start his studies again in the same type of institution or whether he would choose a different path. It should be noted, however, that the questions put to the French and Yugoslav students implicitly located the decision-making process at the point of entry into higher education, whereas the British questionnaire put it further back in the past towards the end of secondary education and, to be more precise, at the time when pupils began their studies for an "A" Level. (1)

This point is important since, while the majority of French and Yugoslav students are satisfied and say that they would do the same thing over again should the case arise (65 per cent in France and 53 per cent in Yugoslavia), only 23 per cent of the British students said that they would go again to their polytechnic.

At the point of entry into higher education, the "die is cast", in a manner of speaking : through his previous choices or failures, the student's possibilities have diminished, as we have already mentioned earlier. Suffice it to recall in this connection that in France only 24.5 per cent of the students had applied for entrance to another higher institution, while in Yugoslavia this proportion was only 10 per cent. These figures show that the majority of the French or Yugoslav students did not envisage any other path than SCHE when they were on the threshold of higher education. It is not surprising, therefore, that when placed in the same circumstances again they should find it difficult to envisage any other solution.

The British case is very different : to begin with, the number who applied for university admission is very high since it comprises 64 per cent of the students, while the situation put to the student when he is asked whether he would begin the same type of study over again is not identical : in fact, when beginning a course of education leading to an "A" Level, the student still has every chance of entering the university - and if he gets two "A" Levels, he can in theory be accepted. Since selection for university entrance is stricter than for a polytechnic, two "A" Levels are generally not sufficient for the former. The student knows that if he works hard enough to reach a very good level, he can hope to go to the university, which is the desire of the majority.

However, we should not conclude from the fact that only 23 per cent of polytechnic students say that they would make the same choice

1) Two "A" Levels are in theory necessary for university entrance.

again that the other students are not satisfied with the education they receive at the polytechnic, but quite simply that if they had to begin again they would adopt a different strategy.

In order to grasp the students' degree of satisfaction in the course of their studies, we introduced another indicator concerning student's initial plans. In other words, we wanted to know whether the "satisfied" students included those who initially had envisaged SCHE only, or whether they had been joined by others.

Using the previous question and the information on whether the student had or had not applied to other institutions besides the SCI, (1) we built up a "typology" of satisfaction based upon past desiderata.

1. The first group of students, whom we can call "satisfied", consists of those who had not wanted to go to any institution other than the one they were in and who would, if necessary, return to it.

2. The second group consists of students who initially wanted to go to other establishments, but who were satisfied with the SCI, and would now make the same choice again if the occasion arose. We say that these students have been "converted" to SCHE.

3. Conversely, certain students had chosen SCHE only, but now regretted their choice : if they could start again, they would not recommence their studies in SCHE. This is the group of "disappointed" students.

4. A fourth group consists of students who did not want to go into SCHE and who came into it finally, but were not converted : they would not begin again if the opportunity arose. This is the group of "hostile" students.

5. Lastly, we put in the "no reply" category those who did not answer either of the two questions. By applying this typology to our three countries and distinguishing in the case of Yugoslavia between full-time and part-time students, we obtained the following results (see Table 26 below).

It is the French students who seem to be most satisfied, with 49 per cent; 16 per cent were converted and, therefore, joined the satisfied group, while only 7 per cent were hostile (the lowest figure for the three countries). The disappointed accounted for 20 per cent of the total, but we shall see that in the three countries one student out of five was always disappointed.

On the other hand, it is in Great Britain that we find the smallest number of satisfied students : 12 per cent, and also the largest number of those hostile : 50 per cent. The converted are only 11 per cent here and the disappointed 22 per cent.

1) Or, in the Yugoslav case, where multiple applications are so few, those who simply wanted to go to another establishment.

GREAT BRITAIN, FRANCE, YUGOSLAVIA

Table 26 : STUDENTS' SATISFACTION WITH THE
TYPE OF INSTITUTION THEY ATTEND

Would you begin again ?	Did you want to go into other types of institu- tions	Atti- tudes	Great- Britain	France	Yugoslavia		
					Full- time	Part- time	Total
yes	no	"satis- fied"	12.2	49.3	27.6	43.3	32.4
	yes	"con- verted"	11.0	15.6	19.8	21.3	20.3
no	no	"disap- pointed"	21.6	20.2	20.1	19.2	19.9
	yes	"hos- tile"	50.1	7.1	30.6	14.8	25.7
	No reply		5.1	7.8	1.8	1.4	1.7
Total			100 = 985	100 = 1824	100 = 978	100 = 432	100 = 1410

Yugoslavia is in an intermediate position : the behaviour of part-time students is fairly similar to that of French students since nearly half of them (43 per cent) are included, as in France, in the ranks of the satisfied. For full-time students, on the other hand, the proportion falls to 28 per cent, which is similar to the British case.

However, the number of full-time hostile students is small as compared with the number of part-time students. The latter, once again, have a much more favourable opinion of the Viša Škola, since there are more satisfied students, and half as many hostile (the converted and disappointed are more or less in equal numbers).

To understand better the differences between the three countries we should refer back to earlier sections of this chapter on multiple applications and on comparisons between SCIs and other higher education institutions. Most of the British students, with their previous level of education and with an extra effort at the end of their secondary schooling, could, in fact, actually have entered a university. It is understandable that they might be close to it psychologically and that they should continually refer to this situation which they consider better and which might, in fact, have been their own.

On the other hand, French and Yugoslav part-time students are more satisfied since, owing to their educational record, or their involvement in working life, the high-prestige institutions are, in any case, beyond their reach. It should be noted that full-time

students in the university-going age-group are much more tempted, like polytechnic students, to judge the establishment not for itself, but in relation to the Faculties and, therefore, to have a lower rate of satisfaction.

The "satisfaction" (or lack of it) which students derive from the institution they attend affects their opinion of these institutions. Thus, in Great Britain, for example, we observed that whereas 71 per cent of the hostile students think that polytechnic studies are easier than university study, only 49 per cent of the satisfied students are of this opinion: the latter, as might have been expected, have a much better image of the polytechnics than the former.

On the other hand, and this is quite logical, only 43 per cent of the satisfied students think that there should be more university places, whereas 65 per cent of the hostile think so: the latter were, in fact, unable to go to the university because of strict selection, and therefore want it to be less rigorous.

In France, 34 per cent of the satisfied students think that the IUTs have higher prestige than the arts faculties, whereas only 19 per cent of the hostile are of this opinion. Similarly, as regards science faculties, 26 per cent of the satisfied students consider that the IUTs are better than they are as far as the quality of teaching is concerned, whereas the proportion is no more than 11 per cent among the hostile.

This phenomenon is fairly general, and we could give many more examples of it.

Lastly, with regard to the question of selection on entry to IUTs, converted students are the most favourable to maintaining it (86 per cent), while only 74 per cent of the disappointed are in favour.

The same phenomenon may be observed among the Yugoslav students. When they compare the Viša Škola with the Faculties, the satisfied students usually have a better opinion than the hostile of the former. For example, with regard to teaching, 18 per cent of the satisfied students find it better in the Viša Škola, whereas only 11 per cent of the hostile share this view. With regard to the interest of the subjects studied, the favourable opinion ranges from 24 per cent for the satisfied to 14 per cent for the hostile.

III. FUTURE PLANS

In conclusion, we tried to find out how SCI students perceive their future and, more precisely, what they plan to do after completing their present studies.

The future intentions of SCI students differ appreciably from one country to another.

Since the SCIs are vocationally oriented, it might be expected that the normal outlet for this type of establishment would be employment (or military service for those under that obligation). But this is not at all the case : in France, 48 per cent of the students plan to continue their studies after obtaining the diploma awarded at the end of IUT studies. In Yugoslavia, out of 100 full-time students, 46 wish to continue their studies (future studies which may be full-time or part-time); out of 100 part-time students, 24 want to continue their studies. This shows that full-time students have their eyes fixed much more on study and therefore, on the Faculties, and part-time students on working life, as the analysis of their opinions concerning the relative merits of the *Viša Škola* and the Faculty has already demonstrated. Lastly, in Great Britain, out of 100 students, 14 wish to continue in higher education and 11 to take vocational courses.

Thus, contrary to the specific aims of the SCIs, entry into working life is not the immediate objective of all their students : in fact, only 18 per cent of the British students said that they wanted to enter employment, as compared with 31 per cent of the *Viša Škola* students, and 23 per cent of the French students who did not wish to continue their studies after attending the IUT.

Finally, the "undecided", those who do not know exactly what they want to do, account for 57 per cent in Great Britain, 29 per cent in France and 30 per cent in Yugoslavia. It is curious to observe in the latter country that indecision is very high among part-time students : over half of the students going into the secondary and tertiary sectors, and three-quarters of the students going into teaching are in this situation. It may be that this indecision has nothing to do with whether they will go out to work or not, but rather with the type of occupation they will have. We know of the difficulties (especially of a psychological nature) experienced by workers who acquire a new skill, when they return to work in a higher-grade job, especially when this is in the same firm.

One might think that this large number of undecided students in France and Great Britain would mean that even those who have a set plan will not strictly abide by it and that the desire to continue studying, in particular, will not be translated into practice.

This is not the case : in France, at least, we have the above-mentioned CEREQ survey (1) which confirms that the end of the IUT

1) Insertion professionnelle des anciens étudiants des Instituts Universitaires de Technologie, CEREQ, 20th August, 1972. Information note N° 10, p. 4.

course is not the end of study for a very large number of students (38.5 per cent).

This phenomenon is much less marked for young people in the computer science department (26.1 per cent), male students in marketing techniques (15.4 per cent) and female students in applied biology (23.9 per cent).

Irrespective of sex, the same proportion (about 17.4 per cent) obtain an additional qualification by taking a course of study while employed.

However, 22.5 per cent of the male students and 13.4 per cent of the female students continue studying as a main occupation.

This survey is particularly interesting : it shows us that the great majority of those who had decided to continue their studies do so in fact. It is to be assumed that this is also the case in the other countries, but only additional surveys could give us any certainty about this. Unfortunately, such surveys are not available for the moment. (1)

Be that as it may, the important fact which we should note is that whatever the country, between a quarter and a half of the students plan to continue their studies at the end of their SCI courses. This proportion is considerable when we remember the aim set for this type of establishment : to train skilled technicians in a relatively short period of time for immediate employment. There is a conflict here which we shall now try to analyse by considering the reasons why students wish to continue studying.

Future plans and type of study

Table 27 below shows for each of the three countries the future plans of the sub-groups of students training for the secondary or tertiary sector. (2)

- Great Britain : it may be noted that in the polytechnics it is the secondary-sector students who most frequently plan to continue studying after their present course : 20.5 per cent plan to do so, whereas the proportion is only 10 per cent for tertiary-sector students. Generally speaking, therefore, more secondary-sector than tertiary-sector students intend to continue studying.

- Yugoslavia : in the Viša Škola, it is mainly the students who are going to take up teaching who are least inclined to continue studying : only 11 per cent wish to do so, whereas 15.5 per cent

1) In Great Britain, according to the information available to us, a survey has been carried out recently on the occupations of polytechnic students.

2) And for teaching, in the case of Yugoslavia.

of the secondary-sector students and 17 per cent of the tertiary sector students have decided on it. It should be noted, however, that there is no marked contrast here between the secondary and tertiary sectors.

- France : in the IUTs, as in the Viša Škola, there are no marked differences between the attitudes of tertiary- and secondary-sector students : 47 per cent of the latter wish to continue studying and 49.5 per cent of the former plan to do so.

It should therefore be noted that, except in the British case, there is hardly any difference in attitude if the type of study is taken into account. However, Yugoslav students intending to take up teaching are more inclined to consider immediate entry into working life than the others.

Future plans and socio-cultural characteristics

We tried to see whether future plans vary according to sex, age and social background (our analytical procedure is the same as that used in Chapter 2, which consists in isolating homogeneous sub-groups for these three criteria).

GREAT BRITAIN, FRANCE, YUGOSLAVIA

Table 27 : DISTRIBUTION OF STUDENTS BY TYPE OF DEPARTMENT
ATTENDED (SECONDARY/TERTIARY) AND THEIR FUTURE PLANS

Great Britain					
Sector	Studies	Voca- tional courses	No other studies	Don't know	Total
Secondary	20.5	6.6	10.7	62.2	100 (37.1)
Tertiary	10.3	13.5	22.1	54.0	100 (62.9)
Total	14.1	11.0	17.9	57.0	100 (100) = 985

France					
Sector	Studies	No other studies	Don't know	Total	
Secondary	46.9	25.6	27.4	100	(49.0)
Tertiary	49.5	20.7	29.7	100	(51.0)
Total	48.2	23.1	28.6	100	(100) = 1 824

GREAT BRITAIN, FRANCE, YUGOSLAVIA (cont.)

Table 27 : DISTRIBUTION OF STUDENTS BY TYPE OF DEPARTMENT ATTENDED (SECONDARY/TERTIARY) AND THEIR FUTURE PLANS
Yugoslavia

Sector	Studies			Part-time studies			Employment			Don't know			Total		
	full-time	part-time	total	full-time	part-time	total	full-time	part-time	total	full-time	part-time	total	part-time	full-time	total
Secondary	17.5	11.8	15.5	28.9	9.3	22.3	34.6	22.4	30.4	19.0	56.5	31.7	100 (32.2)	100 (37.3)	100 (33.8)
Tertiary	18.8	14.3	17.1	27.8	18.2	24.2	34.4	15.8	26.8	20.0	51.7	32.0	100 (34.3)	100 (47.0)	100 (38.2)
Teaching	13.1	1.5	11.1	31.4	4.4	26.8	40.9	17.6	36.9	14.6	76.5	25.2	100 (33.5)	100 (15.7)	100 (28.1)
Total, all sectors combined	16.5	11.3	14.9	29.3	12.7	24.3	36.3	18.5	30.8	17.9	57.4	30.0	100 =978	100 =432	100 =1 410

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Each variable could take two values : male/female, young/older, upper class/lower class background, and eight sub-groups were defined in this way : upper class men, then lower class young men etc., to lower class older women.

Having done this for the three countries, we shall now examine for each one the replies of the various sub-groups to the questions on future plans and, in particular, the decision to continue studying.

- France (cf. Table 28 below)

FRANCE

Table 28 : DISTRIBUTION OF STUDENTS BY SEX, AGE,
SOCIAL BACKGROUND AND FUTURE PLANS

Sex	Age	Social background	Studies	No other studies	Don't know	Total
MALE	Young	Upper class	53.9	15.8	30.2	100 (16.0)
		Lower class	41.2	28.1	30.7	100 (20.5)
	Older	Upper class	54.1	21.9	23.9	100 (22.5)
		Lower class	48.5	22.4	29.1	100 (11.9)
FEMALE	Young	Upper class	50.3	20.9	28.8	100 (8.9)
		Lower class	35.8	33.9	30.2	100 (6.0)
	Older	Upper class	49.0	20.4	30.6	100 (5.4)
		Lower class	37.7	32.1	30.2	100 (2.9)
Total, all categories combined			48.2	23.1	28.6	100 (100) = 1 824

The question "Are you planning to continue your studies ?" received a much higher than average favourable answer from two groups. Thus, 54 per cent of upper class male students, whether young or older, plan to do so, while this proportion falls to 41 per cent for lower class young men.

Generally speaking, female students are less likely to continue their studies than males : the group which planned to do so most consists of the upper class young female students, but the proportion of those who make such a choice is only 50 per cent. The two categories of lower class female students only envisage this option in 36 per cent of the cases for the younger, and 38 per cent for the older group.

The general conclusion for France is therefore that slightly more male than female students wish to continue their studies, but this intention is related to social background : independently of age or sex, students from an upper class background plan more often than the others to continue their studies beyond SCHE (53 per cent, as against 43 per cent).

YUGOSLAVIA

Table 29 : DISTRIBUTION OF STUDENTS BY SEX, AGE, SOCIAL BACKGROUND AND FUTURE PLANS

Sex	Age	Social background	Studies		(of which : part-time studies)		Employment		Don't know		Total	
			full-time	part-time	full-time	part-time	full-time	part-time	full-time	part-time	full-time	part-time
Male	Young	Upper class	54.3	55.6	(35.2)	(22.2)	33.3	22.2	12.4	22.2	100 (10.7)	100 (2.1)
		Lower class	46.9	46.2	(29.9)	(15.4)	32.0	23.1	21.1	30.8	100 (19.8)	100 (3.0)
	Older	Upper class	59.4	28.3	(37.5)	(15.0)	29.7	16.7	10.9	55.0	100 (6.5)	100 (13.9)
		Lower class	45.4	24.5	(33.0)	(13.8)	32.0	18.9	22.7	56.6	100 (9.9)	100 (36.8)
Female	Young	Upper class	51.8	36.8	(25.6)	(21.1)	31.6	5.3	16.7	57.9	100 (17.2)	100 (4.4)
		Lower class	37.5	30.8	(27.0)	(19.2)	46.4	15.4	16.1	53.8	100 (27.3)	100 (6.0)
	Older	Upper class	42.3	13.7	(26.9)	(5.9)	38.5	21.6	29.2	64.7	100 (2.7)	100 (11.8)
		Lower class	35.1	15.8	(24.6)	(8.4)	36.8	20.0	28.1	64.2	100 (5.8)	100 (22.0)
Total, all categories combined			45.8	24.1	(29.3)	(12.7)	36.3	18.5	17.9	57.4	100 = 378	100 = 432

Yugoslavia (see Table 29)

a) full-time students

Lower-class young female students who wish to start work immediately on leaving the Viša Škola are most numerous in this sub-group : they evidently regard the Viša Škola as their final education. Young women from the upper classes; on the other hand, are most numerous in wishing to continue their full-time studies : economic constraints are less pressing for them and they can therefore hope to continue studying.

With regard to male students, it will be noted that those with an upper class background, whatever their age, plan other studies, either full-time or part-time; on the other hand, those from the lower classes either do not know what they want to do (case of the younger ones) or envisage part-time study (case of the older males).

Another sub-group is also rather uncertain regarding its future plans : older female students of lower class origin.

b) part-time students :

The young members of this sub-group (but they are numerically few), whatever their origin or sex, have a stronger desire to continue their studies (full-time or part-time) than the others. Among the older students, the only really noteworthy characteristic is that a large proportion of the female students are undecided (they are numerous in the teaching department).

As in France, the social background factor affects plans for the future, but here another variable, age, seems to play an important part. If we examine the replies of those who say that they wish to continue either full-time or part-time, we can see that the group which considers this possibility most is that of young upper class male students (54 per cent). On the other hand, only 32 per cent of older lower class male students intend to continue their studies. The same contrast is found among female students, but with lower percentages in each case : while 50 per cent of young upper class women wish to undertake further studies, only 23 per cent of older lower class women wish to do so.

Age seems to be the determining factor since among both men and women the younger ones are always more inclined than the older ones to undertake additional studies, whatever their social background, although this adds to the phenomenon. Male students are always more prepared than females (of equivalent age and social background) to continue their studies.

Great Britain (see Table 30 below)

GREAT BRITAIN

Table 30 : DISTRIBUTION OF STUDENTS BY SEX,
AGE, SOCIAL BACKGROUND AND FUTURE PLANS

Sex	Age	Social background	Studies	of which: vocational courses	No other studies	Don't know	Total
Male	Young	Upper class	23.7	(12.3)	16.9	59.4	100 (26.5)
		Lower class	28.7	(12.9)	9.9	61.4	100 (10.3)
	Older	Upper class	27.7	(10.0)	17.0	55.3	100 (27.5)
		Lower class	29.6	(8.7)	8.7	61.7	100 (11.7)
Female	Young	Upper class	16.1	(10.5)	31.5	52.4	100 (14.5)
		Lower class	22.9	(11.4)	40.0	37.1	100 (3.6)
	Older	Upper class	32.4	(13.5)	16.2	51.3	100 (3.8)
		Lower class	18.2	(9.1)	4.6	77.3	100 (2.2)
Total, all categories combined			25.1	(11.0)	17.9	57.1	100 = 985

Allowing for those who wish to continue their higher education and those who wish to take courses leading directly to an occupation, we obtain an average of 25 per cent, but contrary to what happens in France and Yugoslavia, this proportion is above average for a sub-group of older lower class male students (30 per cent). Conversely, the lowest proportions are for younger upper class male (24 per cent) and richer female (16 per cent) students.

Two facts should be emphasized as a provisional conclusion concerning students' future plans :

- a) contrary to the SCI's objectives, an appreciable proportion of students in all three countries wish to continue their studies. This shows quite a fundamental divergence between the aims set for SCHE and students' actual behaviour;
- b) in France and Yugoslavia, plans to continue studying are closely related to age and social background. It is of course quite understandable that it should be easier to consider studying when one is young, while the influence of social background prompts us to suggest that in France and Yugoslavia SCIs have a dual social role :

- for more gifted students from lower-class background, SCHE is a first step towards higher education which may be either a final or an intermediate objective. Contrary to long-cycle studies, the training acquired after two years of SCHE is immediately usable on the labour market. With this assurance, and once the student has a technician diploma, he can then envisage pursuing a higher level course. (1)
- On the other hand, for upper class students who had difficulties in secondary school, SCIs are a kind of "safety net" giving them security by ensuring that they have a training, but, at the same time, enabling them to go on to higher studies.

For the students from lower class backgrounds, SCHE offers a technical training meeting their concerns, a type of education in which they do not feel lost because it is quite close to secondary education (although different) and, finally, the assurance of success within a fairly short interval. SCHE, thus, socialises them in higher education : if this experience is successful, they can enrol in a more independent type of study.

For students from upper-class backgrounds, SCHE offers an assurance of success within a reasonable interval when their problem had hitherto been precisely failure or drop out. SCHE "puts them back in the saddle again" and enables them, if necessary, to go on to other studies at a higher level.

As always, the case of Great Britain must be taken separately. Instead of being regarded as a first "socialising" experience, or as "recycling" in higher education, the polytechnics must be considered as close to the universities, although at a lower level. Once this option has been chosen, it is difficult to get out of it. On the other hand, it should be remembered that courses are of varying duration at polytechnics, which makes them very different from the IUTs or the Viša Škola.

1) N.B. In France, again according to the above-mentioned CEREQ survey (p. 13), the training most sought after by male students is in engineering through the engineering colleges, or a State higher technical training establishment for adults : the "Conservatoire National des Arts et Métiers" (42 per cent follow these paths).

CONCLUSION

The creation and development of short-cycle higher education (SCHE) (1) was designed to achieve three fundamental objectives :

1. First of all, to train middle-level manpower who can go directly into employment. The aim here was :

- a) to meet the growing needs of firms and government departments in this field;
- b) to ensure easy integration into employment on completion of studies.

2. Next, SCHE should respond to the needs of mass education, and thereby help to make education more democratic.

3. Lastly, and this applies to many countries, the traditional universities do not seem able to change quickly enough to respond to the modern world's demands, whether in curricula, teaching methods, administration and organisation, or relations with the outside world. In view of this inertia and resistance to change within universities, it is felt that new institutions which have no long-established tradition can initiate certain processes of change much more easily. This function of innovation is the third aim of SCHE.

Several years have already gone by since the introduction of SCHE with a view to achieving the aims set out above. We have therefore attempted a critical analysis on the basis of three different countries' experiences. Our study cannot, of course, claim to make a general evaluation of the functioning of SCHE, and our conclusions cannot be regarded as final and all-embracing. On the other hand, by choosing three countries with different post-secondary structures and different types of SCHE, we think we have demonstrated that the operation of SCIs and their assessment by the direct users, i.e. students, vary from one country to another.

We can already conclude that the student population and its attitudes and opinions concerning these institutions vary according

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- 1) It will be remembered that this is a vocationally-oriented post-secondary education not exceeding two or three years.

to the place which SCIs occupy in the overall post-secondary system.

Throughout this study, we have seen that the three types of SCIs considered can be graded objectively according to certain criteria such as the social background of their students, the proportion of female students and the school background.

We think that this hierarchy, which is perceptible throughout our comparison, is partly connected with the degree of selection on entry to each institution, and with the distance separating them from higher education traditional long-cycle.

According to country, the SCIs considered are more or less highly placed in the higher education hierarchy.

Since the British polytechnics are parallel with the traditional universities, they are on the highest level and close to the universities, which enjoy the greatest prestige in Great Britain.

In France, since the IUTs are administratively integrated within the universities, but differ from them as regards internal organisation, they are on an intermediate level.

In Yugoslavia, since the Viša Škola are outside the university and have practically no openings to the university world, they are on the lower level of higher education.

We wish to distinguish two conclusions in our final remarks :

- the first concerns the evaluation of the three types of institutions examined;
- the second, more general, remark concerns the functioning conditions of SCHE.

We shall, therefore, first give a general opinion on the various institutions examined.

a) The Polytechnics

Given the many similarities between the polytechnics and the universities, competition between the two institutions is unavoidable. As regards, in particular, the school background of students, although the average level of attainment required for admission to a polytechnic is lower than for the universities, a great many polytechnic students, nonetheless, have the minimum level required for university entrance. They have merely been eliminated by selection. For this reason, polytechnic students' opinions of the institutions they attend are greatly influenced by this proximity of the university, which is where they would have liked to go to (64 per cent of them wanted to) and where they could have gone if there had been more places. Psychologically, the university remains the reference point and it is understandable that only 12 per cent of the students are regarded as "satisfied". (1)

1) As understood in Chapter III. 160

A number of other points may be credited to the polytechnics : their recruitment is more democratic than that of the universities; the subjects taught are closer to the economy's needs and, lastly, the polytechnics are genuinely concerned with facilitating "sandwich" or part-time courses.

b) The University Institutes of Technology (IUTs)

In France, it must be said that the IUTs function adequately; the proportion of "satisfied" students, amounting to 49 per cent, is high. More than three-quarters of the students think that IUTs are really superior to the arts faculties, as regards the preparation for working life, which is in point of fact one of the targets set for the IUTs. It is therefore particularly fortunate that students should be convinced of this. This is not a false impression either, since surveys have shown that IUT graduates have little difficulty in finding a place on the labour market. This is a point in favour of the IUTs.

The IUTs should also be credited with the very low rate of drop-outs during the course of study and with the relatively more democratic recruitment compared to the University.

Lastly, we found that the IUTs enabled a number of students to go on to higher studies. Although this is in contradiction with the aims of SCHE, it is fortunate from the individual standpoint that the institution has helped some students to develop their potentialities.

For all these reasons, the general verdict on the IUTs is bound to be favourable.

c) The Viša Škola

In Yugoslavia, a good number of students are "satisfied" with the Viša Škola : 32 per cent. It should not be forgotten that these are the lowest establishments in higher education in Yugoslavia, as opposed to the IUTs in France and the polytechnics in Great Britain. Viša Škola students are, moreover, quite aware of this and if they rate these schools higher than the Faculties for preparation for working life, they rightly place the Faculties above the Viša Škola for all matters connected with future social status and its related advantages.

This realistic perception of the future means that Viša Škola students cannot be strong partisans of their school : even if the latter suits them with regard to the form of teaching of the facilities offered for part-time work, they know that it is nonetheless on a lower level.

Taking a broader view now and looking at the place occupied by the various SCIs within higher education as a whole, our conclusions will be rather different :

1. Great Britain

Do the polytechnics really correspond to the aims of SCHE ? We do not hesitate to ask this question in the conclusion, even though, through the present study, we have taken for granted that they do correspond. There can be no doubt that they have permitted change by introducing disciplines which the university refuses to consider. Furthermore, it is certain that they cover a large number of students, nearly as many as the universities (in 1970, there were 200,000 university students and 150,000 polytechnic students). One fact should be carefully considered : the length of studies in a polytechnic may be more than two years. Moreover, since selection is made on entry, the students who go there have a fairly high level of attainment.

At the same time, there are also other higher education establishments, such as the "colleges of education", or other vocational institutions at a lower level than the polytechnics or the universities which provide a vocational qualification in a short time. We saw that, in 1970, 36.4 per cent of secondary school-leavers went to these types of establishment. It is not unlikely that such institutions correspond more closely to the aims of SCHE than the polytechnics.

2. France

In France, too, the IUTs are not the only SCIs : besides teacher training (i.e. the "écoles normales"), there are :

- the higher technician sections, which are quite similar to the IUTs in recruitment and aims;
- all the vocational schools, of which there is a very wide variety, especially as regards level required and training given.

But even if we regard all these schools as coming under SCHE (50,000 students in 1972) together with the higher technician sections (26,500) and the IUTs (32,000), the total obtained (108,500) accounts for only 13 per cent of the total number of students ; that is to say long-cycle higher education predominates and comprises 85 per cent of all students (824,000).

These figures lead us to the following conclusion : SCHE in France has not attracted a large number of students away from long-cycle studies; indeed, their proportion is far lower than the numbers officially foreseen by the government. On the other hand, even if they constitute a relatively small sector, IUTs seem, on the whole, to operate satisfactorily.

3. Yugoslavia

In Yugoslavia, on the contrary, it must be agreed that the Viša Škola do, in fact, meet the aims of SCHE : in two years, they train the higher technicians needed by the economy. They contain a large

number of students, since, in 1971, 31 per cent of total higher education enrolment was at these schools (as against 65 per cent in the Faculties).

It may seem paradoxical that the institution which corresponds best in the three countries to the aims of SCHE should be the one which is lowest in the hierarchy : in fact, this leads us to take a very close look at a fundamental distinction we made between the three institutions, i.e. the polytechnics, the IUTs and the Viša Škola.

It should not be forgotten that while the function of education is to dispense knowledge and provide training, it also influences the distribution of places in society, the highest places going to those who have had the greatest success in the institutions enjoying the highest prestige.

Within the limits of his aspirations, which vary, of course, according to his social background, age, sex, etc., every student aims for the best places in the social hierarchy. It is hard to believe that he would of his own accord aim merely for a place which he considers to be a minor one. There is every reason to believe that, if he accepts this kind of place, it is because he could not get a better one.

In view of the present situation in which long-cycle higher education constitutes one of the main routes to the top positions of the social scale, SCHE is bound to enjoy less prestige.

SCHE policy, or a policy for all higher education ?

The preceding remarks show us why it is not possible to promote SCHE as such in the hope that if its prestige is raised by various means, a sufficient number of students will choose it. French experience with the IUTs shows us that this is not at all the case; various methods have been used in France to raise the prestige of the SCIs : IUT students were given student status (whereas those in the higher technician sections do not enjoy this status), and there is some selection for entrance (whereas none exists for university entrance). The result has been that the IUTs do not fulfil the aims of SCHE : the number of students is very small and a substantial proportion of them want to continue their studies.

The French solution has therefore not been very effective in promoting the development of SCHE.

We find, on the other hand, that the strategy chosen in the other two countries (selection for university entrance) has enabled SCHE to develop : in Yugoslavia, the Viša Škola, and in Great Britain, the various higher education establishments other than the universities and the polytechnics.

Selection at the start of higher education has two closely linked consequences :

- it raises the prestige of the highest establishment and has the counter-effect of lowering the status of the establishment which takes those who could not get into the former;
- * - it diverts a large number of students from long-cycle higher education.

So long as both long and short systems of higher education continue to exist side by side, it is not possible to have high-level vocational education which also caters for a large number of students. If its level is high, it will tend to become longer (as in the polytechnics, and for certain students from the IUTs). If it is short and concerns a large mass of students, its level will be lower (as in the Viša Škola).

If we want vocationally oriented SCHE for a large number of students, there must be selection not at the beginning of this type of education but at the level of long-cycle higher education. The aims of SCHE will be met by way of consequence.

Is the conception of SCHE as a low-prestige type of education anti-democratic ? We do not think so. Although in France, for example, selection for university entrance has so far been resisted, there is nothing to prevent financial assistance and family contacts from favouring those who are precisely in the most favourable position already.

What is essential, however, is intensive action to increase equality of opportunity for everyone so that any future selection is based on criteria of merit, and not on criteria more or less connected with social background.

ANNEX

YUGOSLAVIA

Table A : GROWTH OF ENROLMENT PERCENTAGES
BY TYPE OF INSTITUTION, 1960-71

Year	Faculties	Viša Škola	Colleges	Art Academies	Total
1960	79.1	18.4	1.1	1.3	100 (104 786)
1962	70.9	25.9	2.2	1.0	100 (158 010)
1963	66.4	29.8	2.7	1.1	100 (160 092)
1964	61.7	33.2	3.8	1.3	100 (160 595)
1965	57.8	37.0	4.0	1.2	100 (170 499)
1966	58.0	37.2	3.7	1.1	100 (184 923)
1967	56.9	38.5	3.5	1.1	100 (195 454)
1968	56.5	39.2	3.4	0.9	100 (210 810)
1969	63.7	32.5	2.9	0.9	100 (231 440)
1970	63.7	32.5	2.9	0.9	100 (239 701)
1971	65.2	31.0	2.9	0.8	100 (261 203)

Source : Yugoslav Statistical Yearbook, 1971.

YUGOSLAVIA

Table B : DISTRIBUTION OF STUDENTS BY SEX AND BY TYPE OF INSTITUTION, 1968-71

Year	Faculties			Viša Škola			Colleges			Art Academies			All institutions combined		
	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total
1968	63.7	36.3	100 119 045	60.4	39.6	100 851 270	74.5	25.5	100 7 142	57.4	42.8	100 2 053	62.7	37.3	100 210 080
1969	64.5	35.5	100 140 667	59.4	40.6	100 83 947	69.0	31.0	100 4 745	56.9	43.1	100 2 105	62.1	37.9	100 231 444
1970	61.9	38.1	100 152 519	56.7	43.3	100 77 901	67.7	32.3	100 7 101	57.6	42.4	100 2 180	60.4	39.6	100 239 701
1971	58.7	41.3	100 170 412	58.3	41.7	100 81 074	62.9	37.1	100 7 560	58.2	42.7	100 2 157	58.7	41.3	100 261 203

Source : Yugoslav Statistical Yearbook, 1971.

ENGLAND AND WALES

Table C : NUMBER OF SECONDARY SCHOOL LEAVERS ENTERING
POST-SECONDARY EDUCATION AS FULL-TIME STUDENTS, 1960-70
(advanced courses only)

(in thousands)

Institution	1966	1967	1968	1969	1970	Average annual increase
Universities	34.3	34.9	36.8	36.8	37.0	1.9%
Colleges of Education	19.1	19.4	20.7	21.4	20.0	1.1%
Other institutions	6.5	7.1*	7.6*	8.2	9.0	8.2%
All institutions combined	59.9	61.4	65.1	66.4	66.0	2.4%

* estimate.

Source : Statistics of Education, 1966, vol. 2, 1969, vol. 2,
1970, vol. 2.

ENGLAND AND WALES

Table D : SCHOOL BACKGROUND OF SECONDARY SCHOOL LEAVERS (1969-1970)
ENTERING DIFFERENT TYPES OF POST-SECONDARY EDUCATION
(advanced courses only)

Secondary school	University	Poly- technics	Other	Colleges of education	Total
Independent	73.4	6.0	5.6	15.0	100 (11.4)
Direct grant	68.6	7.4	3.4	20.6	100 (11.1)
Grammar	55.0	8.8	5.3	30.9	100 (50.8)
Comprehensive	48.0	9.9	4.3	37.8	100 (21.4)
Other	43.9	11.7	6.4	37.9	100 (4.0)
Modern	12.4	5.6	3.4	78.7	100 (1.4)
Total, all schools combined	56.1	8.6	5.0	30.3	100 (100) = 65 920

Source : Statistics of Education, 1970, vol. 2, pp. 8-9

GREAT BRITAIN

Table E : DISTRIBUTION OF STUDENTS BY SOCIAL BACKGROUND
AND BY TYPE OF INSTITUTION

	Father's occupation	University 1961	Other higher education institutions 1961	Univer- sity entrants 1971	Active population: Men 1966
Non-manual	Professional and managerial	18	12		
	Middle level executives	41 71	32 58	71	36
	Clerical	12	14		
Manual and no reply	Skilled worker	18	28		
	Semi-skilled worker	6 29	8 42	29	64
	Unskilled worker	1	2		
	No reply	4	4		
	Total	100	100	100	100

Sources : 1961 : Robbins Report, Higher Education, HMSO, 1963.
1971 : Statistical Supplement to the tenth Report, The Universities Central Council on Admissions, London, 1973.
1966 : Census of Population, 1966.

ENGLAND AND WALES

Table F : SECONDARY SCHOOL LEAVERS (1969-1970) ENTERING
POST-SECONDARY EDUCATION, BY SEX AND TYPE OF INSTITUTION
(advanced courses only)

Institution	Sex		Total
	Male	Female	
Polytechnics	74.0	26.0	100 (8.6)
Other	69.1	30.9	100 (5.0)
Universities	64.8	35.2	100 (56.1)
Colleges of education	22.3	77.7	100 (30.3)
Total, all institutions combined	52.9	47.1	100 (100) = 65 920

Source : Statistics of Education, 1970, vol. 2, pp. 8-9.

ENGLAND AND WALES

Table G : STUDENTS IN POLYTECHNICS - DISTRIBUTION
BY SEX AND BY DEPARTMENT
(advanced courses only)

Department	Sex		Total
	Male	Female	
Technical	99.1	0.9	100 (29.4)
Administrative, business and social studies	85.8	14.2	100 (35.5)
Science	84.4	15.6	100 (14.7)
Architecture and services	81.7	18.3	100 (8.0)
Artistic	53.8	46.2	100 (5.2)
Medical	51.9	48.1	100 (3.4)
Languages	40.2	59.8	100 (2.5)
Teacher training	39.0	61.0	100 (1.3)
Total, all departments combined	84.6	15.4	100 (100) = 91 080

Source : Statistics of Education, 1970, vol. 3, pp. 74-75.

FRANCE

Table H : UNIVERSITIES : DISTRIBUTION OF STUDENTS
BY DEPARTMENT OF STUDY (1972)

Discipline*	N°	%
Law and economic sciences	148 700	23.2
Sciences	113 300	17.6
Arts and human sciences	236 900	36.9
Medicine and dentistry	119 200	18.6
Pharmacy	23 500	3.7
Total, universities	641 600	100

* Excluding "grande école" students enrolled at the university.

Source : Tableaux de l'Education nationale, édition 1973.

FRANCE

Table I : GROWTH OF POST-SECONDARY EDUCATION
(1959-1972)

Year	Teacher training (public sector only)	Preparatory classes for "grandes écoles"	Colleges *	Higher technician sections	IUTs	Total technical education	Universities	Total
1959	10.0 *	17.6	30.0	5.7	-	5.7	161.4	224.7
1960	10.9 *	18.9	32.0	7.5	-	7.5	172.4	241.7
1961	13.9 *	22.6	34.0	8.0	-	8.0	173.6	252.1
1962	12.8 *	23.6	32.0	9.4	-	9.4	202.3	280.1
1963	11.1 *	24.7	33.0	12.2	-	12.2	242.7	323.7
1964	12.5 *	25.9	36.0	16.2	-	16.2	273.4	364.0
1965	14.0 *	28.0	38.0	18.7	-	18.7	309.7	408.4
1966	13.7 *	28.8	42.0	25.6	-	25.6	332.5	442.6
1967	13.6 *	28.0	46.0	30.0	1.5	31.6	370.9	490.1
1968	13.8	28.1	51.0	28.7	5.4	34.1	432.0	559.0
1969	14.2 *	30.0 *	56.0	27.6	11.9	39.5	540.0 *	679.7
1970	14.7	31.9	62.0	26.5	17.3	43.8	591.5	743.9
1971	14.5	31.2	68.0	26.8	24.4	51.2	613.2	778.1
1972	17.5	31.4	75.0	26.5	32.0	58.5	641.6	824.0
1972 base 100 1959	175	178	250			1 029	398	367
Average rate of annual increase	4.4%	4.6%	7.3%			19.6%	11.2%	10.5%

* Estimate

Sources : Tableaux de l'Education nationale, édition 1969-70-72-73; Ministère de l'Education nationale, Service central des Statistiques et Sondages : 16, January 1973, doc. 4 367, March 1973, Doc. 3 177, 3 507, 4 212, 4 314.

FRANCE

Table J : DISTRIBUTION OF STUDENTS BY SOCIAL BACKGROUND
AND BY TYPE OF INSTITUTION

Socio-occupational category	Ecoles des Hautes Etudes Commerciales HEC 1971	Universities* 1971	IUTs 1972	Population 17-21 age group
Farmers and agricultural workers	2.4	9.5	12.8	17.4
Self-employed in industry and trade	10.1	14.6	12.6	9.4
Members of the professions and senior executives	51.5	29.5	13.6	5.2
Middle-level executives	19.6	17.0	14.1	6.3
Clerical workers	5.1	9.6	10.7	7.6
Industrial workers	2.5	14.5	22.8	40.1
Services personnel				
Miscellaneous	3.5	5.3	13.4	14.0
No occupation				
Total	100 820	100 399 007	100 29 317	100 3 223 660

* Universities : excluding institutes and IUTs, and without the Paris region.

Source : Ministère de l'Education nationale. Statistiques et Sondages.
Doc. 4 222, March 1972
Doc. 4 362, March 1973
Doc. 4 393, July 1973

FRANCE

Table K : DISTRIBUTION OF STUDENTS ENTERING 1ST YEAR
IUTs AND 1ST CYCLE UNIVERSITY, BY AGE

Age at 1st January	1st cycle (1971)	IUTs (1972)
17 years and under	6.5	1.6
18 years	22.6	20.2
19 years	26.1	32.4
20 years	19.9	28.4
21 years	10.5	12.6
22 years	7.7 *	2.7
23 years and over	7.6 *	2.1
Total	130	100

* Estimate.

Sources : Ministère de l'Education nationale. Statistiques et Sondages,
doc. 4 222, March, 1972.
Forecasting Directorate, Working Group IUT, STS, interim note,
January, 1973.

FRANCE

Table L : INSTITUTS UNIVERSITAIRES DE TECHNOLOGIE 1971 -
DISTRIBUTION OF SEXES BY SOCIAL BACKGROUND

Socio-occupational categories	Sex		Total	
	M	F		
Farmers and agricultural workers	69.4	30.6	100	(12.8)
Self-employed in industry and commerce	74.0	26.0	100	(12.6)
Professional and managerial workers	70.7	29.3	100	(13.6)
Middle-level executives	76.1	23.9	100	(14.1)
Clerical workers	75.5	24.5	100	(10.7)
Industrial workers	78.0	22.0	100	(22.8)
Services personnel	75.7	24.3	100	(13.4)
Miscellaneous				
No occupation				
Total, all categories combined	74.6	25.4	100	(100)
			29 317	

Source : Ministère de l'Education nationale - Statistiques et Sondages,
doc. 4 222, March, 1972.

FRANCE, GREAT BRITAIN, YUGOSLAVIA

Table M : DISTRIBUTION OF STUDENTS BY AGE (SAMPLES)

Age	Yugoslavia	France	Great Britain
Under 18			0.3
18	1.3	12.6	10.2
19	11.1	25.5	44.4
20	23.5	30.6	
21	20.9	22.1	
22	9.5		38.5
23	5.9	8.8	
24	4.4		
25			
Over 25	22.9	0.3	6.7
No reply	0.5		0.0
Total	100 = 1 410	100 = 1 824	100 = 985

YUGOSLAVIA

Table N : DISTRIBUTION OF STUDENTS BY DEPARTMENT, TYPE OF ATTENDANCE AND SOCIAL BACKGROUND

Sex	Type of attendance	Social background	Technical	Agri-culture	Building	Post and Telecom. school	Statistics	Edu-cation I	Eco-nomics	Edu-cation II	Total
Male	full-time	Upper classes	22.5	11.8	23.7	7.7	6.5	1.2	16.6	10.1	100 (12.0)
		Lower classes	15.5	32.3	13.7	5.5	4.5	9.6	12.4	6.5	100 (20.6)
	part-time	Upper classes	2.9	5.8	43.5	10.1	0	0	33.3	4.3	100 (4.9)
		Lower classes	7.6	12.2	39.5	7.0	2.3	0	29.1	2.3	100 (12.2)
Female	full-time	Upper classes	1.5	1.0	6.2	3.1	4.6	18.6	37.6	27.3	100 (13.8)
		Lower classes	0.6	2.2	3.7	4.0	6.5	32.7	29.6	20.7	100 (23.0)
	part-time	Upper classes	0	0	12.9	4.3	1.4	0	51.4	30.0	100 (5.0)
		Lower classes	0	5.0	6.6	5.8	6.6	0	43.0	33.1	100 (8.6)
Total, all categories combined			7.3	10.9	15.5	5.5	4.8	12.2	27.9	15.9	100(100) = 1 410

FRANCE

Table 0 : DISTRIBUTION OF STUDENTS BY TYPE OF DEPARTMENT,
(SECONDARY OR TERTIARY SECTOR) BY SEX AND BY FATHER'S OCCUPATION

Sex	Occupation	Secondary sector	Tertiary sector	Total	
Male	Professional and managerial workers	43.2	56.8	100	(9.3)
	Middle level executives	54.9	45.1	100	(15.1)
	Clerical workers	67.7	32.3	100	(14.1)
	Shopkeepers, craftsmen	62.0	38.0	100	(8.7)
	Farmers	75.0	25.0	100	(6.8)
	Supervisors, industrial workers	65.5	34.5	100	(15.1)
	Retired, no occupation	58.9	41.1	100	(3.1)
	No reply	60.9	39.1	100	(4.8)
Female	Professional and managerial workers	7.0	93.0	100	(7.1)
	Middle level executives	7.3	92.7	100	(5.3)
	Clerical workers	5.6	94.4	100	(2.0)
	Shopkeepers, craftsmen	9.5	90.5	100	(2.3)
	Farmers	15.4	84.6	100	(1.4)
	Supervisors, industrial workers	13.4	86.6	100	(3.7)
	Retired, no occupation	0	100	100	(0.4)
	No reply	15.0	85.0	100	(1.1)
	Total, all categories combined	49.0	51.0	100	(100) 1 824

GREAT BRITAIN

Table P : DISTRIBUTION OF STUDENTS BY DEPARTMENT,
BY SEX AND BY FATHER'S OCCUPATION

Sex	Occupation	Tech- nology	Science	Adminis- tration, business and social studies	Arts and lan- guages	Total
Male	Professional and managerial workers	22.8 12.9	15.7 14.3	60.6 12.7	0.8 6.2	100 12.9
	Middle-level executives	25.6 36.9	12.0 27.9	61.4 32.9	0.9 16.8	100 32.9
	Clerical workers	29.6 10.7	17.3 10.0	53.1 7.1	0 0	100 8.2
	Skilled workers	38.0 25.3	14.0 15.0	48.0 11.9	0 0	100 15.2
	Semi-skilled workers	50.0 7.1	15.6 3.6	34.4 1.8	0 0	100 3.2
	Unskilled workers	46.2 2.7	15.4 1.4	30.8 0.6	7.7 6.2	100 1.3
	No reply	28.6 2.7	33.3 5.0	33.3 1.2	4.8 6.2	100 2.1
	Professional and managerial workers	0 0	10.5 2.9	89.5 5.6	0 0	100 3.9
	Middle-level executives	1.7 0.9	10.3 8.6	83.6 16.1	4.3 31.3	100 11.7
	Clerical workers	3.8 0.4	15.4 2.9	73.1 3.1	7.7 12.5	100 2.6
Female	Skilled workers	2.6 0.4	23.7 6.4	73.7 4.6	0 0	100 3.9
	Semi-skilled workers	0 0	11.1 0.7	77.8 1.2	11.1 6.2	100 0.9
	Unskilled workers	0 0	0 0	100.0 0.5	0 0	100 0.3
	No reply	0 0	28.6 1.4	42.9 0.5	28.6 12.5	100 0.7
	Total, all cate- gories combined	22.8 100	14.2 100	61.3 100	1.6 100	100 100

GREAT BRITAIN

Table Q : DISTRIBUTION OF STUDENTS BY TYPE OF DEPARTMENT
(SECONDARY OR TERTIARY SECTOR) BY SEX AND
BY FATHER'S OCCUPATION

Sex	Occupation	Secondary sector	Tertiary sector	Total	
Male	Professional and managerial workers	38.8	61.2	100	(12.9)
	Middle-level executives	37.7	62.3	100	(32.9)
	Clerical workers	46.9	53.1	100	(8.2)
	Skilled workers	52.0	48.0	100	(15.2)
	Semi-skilled workers	60.6	39.4	100	(3.2)
	Unskilled workers	61.6	38.4	100	(1.3)
	No reply	59.2	40.8	100	(2.1)
Female	Professional and managerial workers	10.5	89.5	100	(3.9)
	Middle-level executives	12.1	87.9	100	(11.7)
	Clerical workers	9.2	80.8	100	(2.6)
	Skilled workers	26.2	73.8	100	(3.9)
	Semi-skilled workers	11.0	89.0	100	(0.9)
	Unskilled workers	0	100	100	(0.3)
	No reply	28.5	71.5	100	(0.7)
	Total, all categories combined	37.0	63.0	100	(100)
				985	

GREAT BRITAIN

Table R : DISTRIBUTION OF STUDENTS BY PREVIOUS LEVEL
OF ATTAINMENT, BY SEX, AGE AND SOCIAL BACKGROUND

Sex	Age	Social background	Low level	Middle level	High level	Total	
Male	Younger	Upper classes	8.8	44.4	46.7	100	(26.5)
		Lower classes	11.9	46.5	41.6	100	(10.3)
	Older	Upper classes	24.3	34.7	41.0	100	(27.5)
		Lower classes	51.3	20.0	28.7	100	(11.7)
Female	Younger	Upper classes	5.6	51.0	43.4	100	(14.5)
		Lower classes	8.6	37.1	54.3	100	(3.6)
	Older	Upper classes	16.2	32.4	51.4	100	(3.8)
		Lower classes	18.2	36.4	45.4	100	(2.2)
Total, all categories combined			18.4	39.2	42.4	100	(100) 985

FRANCE

Table S : DISTRIBUTION OF STUDENTS BY PREVIOUS LEVEL
OF ATTAINMENT, BY SEX, AGE AND SOCIAL BACKGROUND

Sex	Age	Social background	Low level	Middle level	High level	Total
Male	Younger	Upper classes	5.1	58.8	36.1	100 (16.0)
		Lower classes	45.1	44.1	10.7	100 (22.5)
	Older	Upper classes	3.5	44.4	52.1	100 (20.5)
		Lower classes	32.2	44.8	23.0	100 (17.9)
Female	Younger	Upper classes	8.6	46.0	45.4	100 (8.9)
		Lower classes	52.0	35.7	12.2	100 (5.4)
	Older	Upper classes	5.5	43.1	51.4	100 (6.0)
		Lower classes	50.9	35.9	13.2	100 (2.9)
Total, all categories combined			22.6	46.1	31.1	100 (100) 1 824

YUGOSLAVIA

Table T : DISTRIBUTION OF STUDENTS BY PREVIOUS LEVEL
OF ATTAINMENT, BY SEX, AGE AND SOCIAL BACKGROUND

Sex	Age	Social background	Low level	Middle level	High level	Total	
Male	Younger	Upper classes	15.8	60.5	23.7	100	(8.1)
		Lower classes	10.6	52.2	37.2	100	(14.7)
	Older	Upper classes	15.3	45.2	39.5	100	(8.8)
		Lower classes	14.1	53.1	32.8	100	(18.2)
Female	Younger	Upper classes	6.4	46.5	47.1	100	(13.3)
		Lower classes	6.8	50.9	43.3	100	(20.8)
	Older	Upper classes	5.2	52.0	42.9	100	(5.5)
		Lower classes	12.5	60.5	27.0	100	(10.8)
Total, all categories combined			10.6	52.3	37.1	100	(100) 1 410

GREAT BRITAIN

Table U : DISTRIBUTION OF STUDENTS BY DEPARTMENT CHOSEN,
BY SEX, SOCIAL BACKGROUND AND PREVIOUS LEVEL OF ATTAINMENT

Sex		Social background	Previous level of attainment	Technology	Sciences	Administration, business and social studies	Arts and languages	Total
Male	Upper classes	High	18.4	11.2	69.1	1.3	100	(23.7)
		Middle	21.0	17.1	61.9	0	100	(21.3)
		Low	55.1	12.4	31.5	1.1	100	(9.0)
	Lower classes	High	13.3	18.7	68.0	0	100	(7.6)
		Middle	28.6	22.9	45.7	2.9	100	(7.1)
		Low	77.5	7.0	15.5	0	100	(7.2)
Female	Upper classes	High	0	6.2	91.4	2.5	100	(8.2)
		Middle	2.3	17.7	77.7	2.3	100	(8.6)
		Low	7.1	0	71.4	21.4	100	(1.4)
	Lower classes	High	0	13.8	79.3	6.9	100	(2.9)
		Middle	4.8	28.6	66.7	0	100	(2.1)
		Low	0	28.6	57.1	14.3	100	(0.7)
Total, all categories combined			22.8	14.2	61.3	1.6	100	(100)
								985

FRANCE

Table V : DISTRIBUTION OF STUDENTS BY SECTOR OF ACTIVITY,
BY SEX, SOCIAL BACKGROUND AND PREVIOUS LEVEL OF ATTAINMENT

Sex	Social background	Previous level of attainment	Secondary sector	Tertiary sector	Total
Male	Upper classes	Low	55.5	44.5	100 (11.0)
		Middle	56.8	43.2	100 (19.3)
		High	58.4	41.6	100 (8.2)
		Low	53.4	46.6	100 (6.5)
		Middle	64.7	35.3	100 (17.1)
		High	71.1	28.9	100 (14.8)
Female	Upper classes	Low	9.2	90.8	100 (3.6)
		Middle	7.3	92.7	100 (6.0)
		High	4.6	95.4	100 (4.8)
		Low	12.1	87.9	100 (1.8)
		Middle	13.6	86.4	100 (3.6)
		High	11.1	88.9	100 (3.5)
Total, all categories combined			49.0	51.0	100 (100) 1 824

YUGOSLAVIA

Table W : DISTRIBUTION OF STUDENTS BY SECTOR OF ACTIVITY,
BY SEX, SOCIAL BACKGROUND AND PREVIOUS LEVEL OF ATTAINMENT

Sex	Social background	Previous level of attainment	Secondary sector	Tertiary sector	Total	
Male	Upper classes	Low	59.5	40.5	100	(2.6)
		Middle	54.4	45.6	100	(8.9)
		High	57.9	42.1	100	(5.4)
	Lower classes	Low	48.3	51.7	100	(4.1)
		Middle	61.5	38.5	100	(17.3)
		High	64.0	36.0	100	(11.4)
Female	Upper classes	Low	12.5	87.5	100	(1.1)
		Middle	8.7	91.3	100	(9.0)
		High	10.7	89.3	100	(8.6)
	Lower classes	Low	5.1	94.9	100	(2.8)
		Middle	7.9	92.1	100	(17.1)
		High	8.5	91.5	100	(11.7)
Total, all categories combined			33.8	66.2	100	(100) 1 410

YUGOSLAVIA

Table X : DISTRIBUTION OF STUDENTS BY TYPE OF STUDIES,
BY SEX, BY SOCIAL BACKGROUND AND
PREVIOUS LEVEL OF ATTAINMENT

Sex	Social back- ground	Previous level of attain- ment	Agri- culture	Tech- nical	Teaching	Services	Total
Male	Upper classes	Low	8.1	51.4	5.4	35.1	100 (2.6)
		Middle	12.8	41.6	10.4	35.2	100 (8.9)
		High	6.6	51.3	9.2	32.9	100 (5.4)
	Lower classes	Low	20.7	27.6	10.3	41.4	100 (4.1)
		Middle	29.9	31.6	11.1	27.5	100 (17.3)
		High	18.6	45.3	11.2	24.8	100 (11.4)
Female	Upper classes	Low	6.2	6.3	50.0	37.5	100 (1.1)
		Middle	0.8	7.9	37.0	54.3	100 (9.0)
		High	0	10.7	45.5	43.8	100 (8.6)
	Lower classes	Low	5.1	0	28.2	66.7	100 (2.8)
		Middle	1.2	6.6	48.1	44.0	100 (17.1)
		High	4.9	3.6	52.1	39.4	100 (11.7)
Total, all categories combined			10.9	22.8	28.1	38.2	100 (100) 1 410

YUGOSLAVIA

Table Y : STUDENTS' REASONS FOR CHOICE OF A VISA SKOLA - DISTRIBUTION ACCORDING TO TYPE OF ATTENDANCE

Reason for the choice	Had little or considerable weight		Of which : considerable weight		No weight at all		No reply		Total
	full-time	part-time	full-time	part-time	full-time	part-time	full-time	part-time	
Career prospects	60.2	69.2	25.8	51.8	18.8	8.6	21.0	22.2	100
Short duration of study	64.4	51.6	25.1	25.0	20.6	15.3	15.0	33.1	100
Easy to find a job on leaving	63.5	41.0	33.3	19.7	18.9	20.4	17.6	38.7	100
Near your home	46.4	44.9	33.4	35.0	31.4	17.8	22.2	37.3	100
Teaching methods	40.6	44.9	12.8	23.6	34.6	18.5	24.8	36.6	100
High prestige enjoyed by the school you are attending	37.6	46.8	8.8	19.7	39.2	16.9	23.2	36.3	100
High prestige of the Visa Skola in general	34.0	41.0	5.0	15.3	41.0	20.1	24.9	39.0	100
Easier studies	37.1	29.6	9.9	9.0	40.6	28.5	22.3	41.9	100
Because there was no other choice	31.5	33.8	19.5	25.9	37.4	22.9	31.1	43.3	100
Because it is a stepping stone to a Faculty	31.9	23.4	19.3	14.6	41.6	30.6	26.5	46.1	100
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